Shaping perspectives of Antarctica:

A study of the value and production of Antarctic visual art

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Adele Jackson

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School of Earth and Environment | Te Kura Aronukurangi

University of Canterbury | Te Whare Wānanga o Waitaha

Abstract

Visual artists have been instrumental in extending human knowledge of Antarctica since the earliest days of recorded exploration of the far south. This thesis asks, in a contemporary context, what the value of visual artists working in Antarctica is, and what it is they contribute to knowledge and understandings of the continent. This is a qualitative study, international in scope, with a 21st century focus. The study directly addresses the absence of a contemporary international analysis in the Antarctic visual art literature and provides a visual arts perspective to Antarctic values scholarship that is otherwise missing.

Reflecting a pragmatic methodological approach, the study conforms largely to a constructivist paradigm whilst also drawing on elements of critical theory. The primary research methods were semi-structured interviews with Antarctic artists, cultural professionals, Antarctic researchers, representatives of Antarctic organisations and visitors to a contemporary Antarctic art exhibition, as well as an online survey open to the public. Hermeneutic analysis of the interview transcripts and survey responses identified key themes in the data. Textual analysis of a selection of Antarctic artworks complemented and extended the discussion and analysis of the key themes. Desk research enabled the collation of an international Antarctic artist chronology, substantially extending what is known about artists' presence. There was a significant increase in the number and cultural diversity of artists after the turn of the 21st century but there has been a dramatic decline on both counts since 2017. This raises questions about who is constructing contemporary cultural understandings of Antarctica and what barriers exist to access. The thesis argues that the extremely low number of artists currently being supported to work in Antarctica will result in a significant void in Antarctic cultural representation, cultural heritage and knowledge if left unaddressed.

This thesis shows that, although there is overwhelming support for artists to work in Antarctica, there are certain values associated with human activity that define the context in which artists work. These values play a significant role in controlling access to the continent and they influence how artists and their work are regarded, with natural science tending to dominate Antarctic knowledge production. However, the findings of this study highlight the importance of multiple modes of inquiry. While artists can contribute significantly to science-based inquiry and associated education and outreach activities, I argue that they have much to contribute to other realms of knowledge and engagement with the continent. Artists have a role in exploring Antarctica as a cultural space and in critically examining the social, political and environmental dimensions in evidence. This research demonstrates that art can reflect, challenge or contribute to constructing cultural norms and values. It operates on an emotional and a cognitive level, creating a space for viewers to construct meanings, feel emotions and have their perceptions expanded or disrupted. Furthermore, the study confirms that as a repository of ideas and a form of communication art has value beyond its aesthetic appeal; art is a form of cultural memory, a valuable legacy, and a resource and source of knowledge for current and future generations.

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Acronyms and abbreviations

AAD	Australian Antarctic Division
ABVC	Antarctic Biennale Vision Club
ANARE	Australian National Antarctic Research Expedition
ASPA	Antarctic Specially Protected Area
ATCM	Antarctic Treaty Consultative Meeting
ATCPs	Antarctic Treaty Consultative Parties
ATS	Antarctic Treaty System
BAS	British Antarctic Survey
BAT	British Antarctic Territory
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CIA	Central Intelligence Agency
COMNAP	Council of Managers of National Antarctic Programs
DNA	Dirección Nacional del Antártico
EBM	Ecosystem-based Management
EOC	Education, Outreach and Communication
HSM	Historic Site and Monument
IAATO	International Association of Antarctic Tour Operators
ICEPAC	ITASC Catabatic Experimental Platform for Antarctic Culture
IGY	International Geophysical Year
INACH	Instituto Antártico Chileno
IPCC	Intergovernmental Panel on Climate Change
IPY	International Polar Year
IASC	International Arctic Science Committee
ITASC	Interpolar Transnational Art Science Constellation
MPA	Marine Protected Area
NAP	National Antarctic Programme
NSF	National Science Foundation
NZ	New Zealand
Ross-RAMP	Ross Sea region Research and Monitoring Project
TMAG	Tasmanian Museum and Art Gallery
SANAP	South African National Antarctic Programme
SANSA	South African National Space Agency
SCAR	Scientific Committee on Antarctic Research
SC-HASS	Standing Committee on Humanities and Social Sciences
SMM	Sense Making Methodology
SPRI	Scott Polar Research Institute
SSAG	Social Sciences Action Group
UK	United Kingdom
UKAHT	United Kingdom Antarctic Heritage Trust
UNFCCC	United Nations Framework Convention on Climate Change
US	United States (of America)
USA	United States of America
USAP	United States Antarctic Program
WAIS	Western Antarctic Ice Shelf

Terminology and definitions

Antarctica
Geographically, the term *Antarctica* requires definition as there are various geographic boundaries that can be applied. The Antarctic Treaty defines a circular boundary at 60° South latitude, which includes the island groups of the South Shetlands and the South Orkneys. By contrast, the Conservation of Antarctic Marine Living Resources Convention defines a boundary that takes account of the Antarctic Polar Front/Antarctic Convergence. The CCAMLR defined boundary extends further north than 60° South latitude between 50° West and 150° East longitude, and encompasses most sub-Antarctic islands (CCAMLR, 2019). This thesis adopts the Antarctic Treaty boundary of 60° South whilst also recognising that some of the artists discussed have visited and created work after visiting sub-Antarctic islands during their Antarctic voyages. Artists who have worked solely in the sub-Antarctic region are not included.

Art
The focus of this thesis is contemporary visual art. While recognising various definitions of visual art exist (Creative New Zealand, 2020; Murray, 2014), for the purposes of this thesis visual art includes drawing, illustration, animation, painting, printmaking, photography, filmmaking, sculpture, installation, graphic design, jewellery making, ceramics, the crafted customary and contemporary practices of First Nations and Indigenous peoples, and the work of those who define themselves as visual artists. I do not include photojournalism, documentary photography and filmmaking, or architecture in this thesis.

Art programme
Each official programme through which a National Antarctic Programme (NAP) has supported artists has a different name, for example the *Antarctic Artists and Writers Program*, the *Antarctic Arts Fellowship*, and *Artists in Antarctica*. Furthermore, some organisations have changed the name of their programme several times. For expediency and consistency, I use the term *NAP art programme* to refer to each and all of the various programmes. It is important to acknowledge that NAP art programmes are not limited to the visual arts. They have supported writers, musicians, performers and humanities scholars. While it is beyond the scope of my thesis to discuss these other disciplines, as my focus is the visual arts, those readers interested in critical explorations of Antarctic literature, music or performance will enjoy the work of Elizabeth Leane, Carolyn Philpott and Hanne Nielsen (Leane, 2012; Leane, Philpott, & Nielsen, 2014; Nielsen, 2020b; Philpott, 2016, 2019; Philpott & Leane, 2016; Philpott, Leane, & Delbridge, 2020).

Artist
The term *artist* throughout the thesis refers exclusively to visual artists.

British English spelling
Except for instances where the American English spelling is used in a proper name or in a quotation, British English is used e.g. *programme*, *organisation* and *centre* are common words used in the thesis.

Environment
The use of the term *environment* and *environmental* in this thesis relates to the natural environment, which I define as the natural world of living and naturally occurring non-living things,

which comprise the earth and its environment. In this definition humans are recognised as natural beings of the biosphere. I use Johnson et al.'s definition of natural to mean that "which is neither made, changed, nor otherwise affect by humans" (Johnson et al., 1997, p. 582). Therefore, I exclude human-made technological and structural elements of the built environment from the definition of the natural environment.

Participants

The terms *research participant*, *participant* and *respondent* are used interchangeably to refer to those who participated in the study. Where relevant to the discussion I identify participants by their professional grouping e.g. artist, scientist or researcher. These groupings are explained in Chapter 2. Where appropriate and helpful I also refer to the research methods to identity participants as either *interviewees*, *exhibition visitors* or *survey respondents*.

The Antarctic Treaty

I use the full title *the Antarctic Treaty* and *the Treaty* interchangeably.

Protocol on Environmental Protection to the Antarctic Treaty

The first time I refer to the Protocol on Environmental Protection to The Antarctic Treaty I use its full title, thereafter I refer to the document as the Madrid Protocol, or simply the Protocol.

1 The context for a study of Antarctic artists and their work

For artists, and everyone else who visits, living and working in Antarctica is different to many other places in the world. No one can live and flourish in Antarctica's extremes without everything needed for survival being transported there, which comes at a significant financial and environmental cost. The expense of enabling people to work on and around the continent necessitates a clear rationale for human presence and human activities. Indeed, "who should be able to visit it, and under what conditions" is a key question for Antarctic humanities and social science scholars (SCAR, 2020a).

Nielsen and Philpott acknowledge that for many artists, travelling to Antarctica is not a pre-requisite for producing quality work. Visiting the continent "does not necessarily mean that their outputs are less "real", representative, or relevant than the work of those who have had immediate experience of Antarctica" (Nielsen & Philpott, 2018, p. 6). Furthermore, Howkins notes that visiting Antarctica gives "a sense of legitimacy which the mere act of going there does not necessarily deserve" (Howkins, 2010, p. 518). However, whilst recognising that valuable work can be achieved without venturing south, Leane suggests that direct experience impacts on artists' and researchers' work "in important and unpredictable ways" (Leane, 2011a, p. 10).

Historically the role of artists was primarily a documentary one but, over time and with developments in image-making technologies, their role changed along with how their contribution to knowledge and understandings of Antarctica was defined. The contexts within which artists work in Antarctica also changed. Geopolitics exert a powerful influence on state and human activity in Antarctica. Scientific research is the principal state activity on the continent, enshrined in the Antarctic Treaty System (ATS) of legal and governance instruments. However, it is commercial tourism that enables the greatest number of people to visit.[1] National Antarctic Programmes (NAPs) and tourism are the two major access avenues for the majority of people working in Antarctica and it is within these two contexts that space for artists is created, and artists create space for themselves.

For human presence in Antarctica more generally, the relationship between visiting and working there and the environmental impact of this is fraught with contradiction. A significant amount of Antarctic scientific research seeks to model climate scenarios and understand the consequences of climate change (SCAR, 2017). Increasing average global temperatures are a consequence of higher levels of greenhouse gases in the atmosphere, including CO_2 produced through the burning of fossil fuels (UN Intergovernmental Panel on Climate Change [IPCC], 2014). Unavoidably, there are CO_2 emissions associated with living, working and conducting research in Antarctica, and the research striving to measure and understand the changing climate is, to some degree, contributing to the climate-change problem. Antarctic tourism is equally contradictory. Often marketed as "eco-tourism" (Bauer & Dowling, 2003), the industry sees tens of thousands of people (see Footnote 1) flying across the world before travelling by diesel-powered vessels to visit the continent. Considering the carbon emissions associated with visiting Antarctica, there is a certain irony that climate change has become an increasingly common subject in the artwork of some artists who have travelled there. At a time when intergovernmental organisations seek to facilitate state negotiations to reduce greenhouse gas emissions (United Nations, 2019b) and increasing public protests and environmental pressure groups are demanding immediate political action (Extinction Rebellion, 2019; School Strike for Climate, 2019), it is appropriate that the question of human presence, including that of artists, in Antarctica should be critically examined.

[1] Tourism figures for the 2019/20 season were 74,851 in total: 18,506 cruise-only visitors; 55,614 landed visits; and 731 deep field visitors (IAATO 2020).

1.1 Positioning the research within Antarctic humanities

The Antarctic humanities have only relatively recently developed as a scholarly domain in a geographical space which is still overall dominated by the natural sciences (Elzinga, 2016, p. 273). However, the humanities deepen our critical understandings of human relationships with, and representations of, the continent (Crane, Leane, & Williams, 2011; Leane & McGee, 2020; Roberts, van der Watt, & Howkins, 2016). As Roberts, Howkins and van der Watt explain,

> *The designation of Antarctica as a continent for the natural sciences left little space for the humanities, yet the peculiarities of how Antarctica has come to be defined, designated and discussed is precisely why the humanities are vital in our understanding of the continent. (Roberts, van der Watt, et al., 2016, p. 2)*

The National Science Foundation (NSF) art programme was the first to create space for humanities scholars to critically examine Antarctica as a cultural space. Environmental historian Stephen Pyne's seminal work *The Ice* (1986) paved the way for a number of other scholars to follow. Nevertheless, writing twenty-five years later, Leane noted the relative dearth of scholarship within the Antarctic humanities (Leane, 2011b), revealing the slow pace of development. This said, Leane acknowledges the growth of an Antarctic humanities academic community in the 21st century. The establishment of the Social Sciences Action Group (SSAG) in 2010 within the Scientific Committee on Antarctic Research (SCAR)[2]; the creation of *The Polar Journal* in 2011, which has a social science and humanities emphasis (Taylor & Francis Group, 2020); the organisation of conferences devoted to Antarctic research in the arts and humanities[3]; and the publication of articles and books, are all signs of increasing interest and activity. Leane describes this as "the cultural turn" in Antarctic studies (Leane, 2011b, p. 150).

As a contribution to the field of Antarctic humanities, this study is concerned with deepening understanding of how contemporary visual artists working in Antarctica are perceived in relation to three key factors:

- *The value of their presence*
- *The value of their work*
- *The values explicit and implicit in their presence and their work*

The key research questions of the thesis, which are discussed in greater detail in the next chapter, are,

> *How can the value of contemporary visual artists' working in Antarctica be described and understood?*
>
> *What do artists contribute to our knowledge and understandings of Antarctica?*
>
> *What are key considerations for the future of artists working in Antarctica?*

[2] Since 2011 the field has developed further with a bi-annual SCAR HASS conference; and the SSAG has evolved from being a SCAR Action Group, to an Expert Group in 2014, to its most recent iteration as the Standing Committee on Humanities and Social Science (SC-HASS) since 2018 (SCAR, 2020a).

[3] *Polar: Fieldwork and Archive Fever* 2007, London (Dean, 2008); *Imagining Antarctica* 2008 Christchurch (Crane et al., 2011); *Antarctic Visions* 2010 Hobart (Crane et al., 2011); *Antarctica: Music, Sound and Cultural Connections* 2011 Australia (Hince, Summerson, & Wiesel, 2015); and *Polar Visual Culture: An International Conference* 2011, Scotland (Gartlan, 2011).

While some historical context is required (and is provided in Chapter 3), the thesis has a 21st century focus, as the emphasis is on understanding current perspectives of contemporary Antarctic art activity. An examination of the recent past and the current situation concerning artists' presence and how their presence and work is perceived enables critical reflection that can be used to inform current and future developments particularly in the provision of Antarctic art programmes. To explain and contextualise the study further, the following subsections position the research in relation to concepts of value and values in the Antarctic context, and in relation to existing literature concerning the critical analysis of Antarctic art.

1.2 Researching and defining value in the Antarctic context

Embarking upon this study, the work of Sira Engelbertz, Rosamunde Codling and the SSAG (now SC-HASS) were instrumental in shaping my understanding of values in the Antarctic context. The definition of value is multifaceted and complex. Engelbertz's interdisciplinary examination and comprehensive review, which formed a preliminary stage in her thesis, *Values in Antarctica: discourse analysis of two topical issues in Antarctic policy* (Engelbertz, 2015, p. 5), highlights that value has several interpretations within and across academic disciplines. In Western academia the study of value has its roots in philosophy. Axiology, the philosophical study of value, is concerned with defining the true essence or nature of a value (Grünberg, Grünberg, & Grünberg, 2000). In psychology, sociology and anthropology, values are associated with internalised beliefs which influence behaviour (Kluckhohn, 1962; Rescher, 1969). Ethical values underpinned by moral judgements concerned with what is *good* and *right* are associated philosophical concepts (Grünberg et al., 2000). In economics, value can be understood in monetary terms, e.g. the value of goods and the relationships between cost and benefit. The complexity of economic value increases when concepts of quality, need and preference are introduced (Engelbertz, Liggett, & Steel, 2013b, p. 13). Additionally, concepts of intrinsic and extrinsic value ask whether it can be determined that something is good in and of itself or whether value originates elsewhere or for the sake of something else (Lemos, 1994; Rønnow-Rasmussen & Zimmerman, 2005). Describing the work of Kluckhorn, who endeavoured to construct a unified theory of value, Engelbertz concludes that there is no single, comprehensive theory of value (Engelbertz, 2015; Kluckhorn, 1958).

A look at dictionary definitions confirms the multiplicity of meaning. As a transitive verb, value has more than one meaning; to value can mean "to estimate the value of" (Oxford English Dictionary [OED], 2020e) or "to consider to have value" (OED, 2020f). The latter of these two is relevant to the exploration of the value of artists working in Antarctica. Value also has multiple definitions and applications as an abstract noun. According to the OED, there are two core definitions from which the range of the word's usage stems. "Worth or quality as measured by a standard of equivalence" (OED, 2020a), has common application in monetary and economic terms, and it also features in mathematics, music and visual art terminology. For example, a value can be an amount represented in algebraic form or the numerical result of a mathematic function; in music the term applies to the duration of a sound or note, or period of silence; in painting and photography, value refers to the relative intensity of hues and tones. However, it is the second core definition, "Worth based on esteem, quality viewed in terms of importance, usefulness, desirability" (OED, 2020b) and its associated applications that are of particular relevance to the discussion of the value of artists and their work in the Antarctic context. Importantly, the second definition has evolved in various ways resulting in nuanced yet distinct usages, three of which this study draws on extensively. Used in the plural, values are defined as "principles or moral standards" (OED, 2020d). This usage corresponds with the definition Engelbertz distilled for her study, which focused on Antarctic environmental

issues and human behaviour. She defined values as “internalised codes that affect behaviour and include judgements on what is good and desirable” (Engelbertz, 2015, p. 5). While this definition is applicable to my research, it does not encapsulate all the facets of value that the thesis explores. Concepts of intrinsic and extrinsic value are also pertinent to the study. Intrinsic value, sometimes termed “final value” (Perrine, 2018), attributes worth to a thing in and of itself, while extrinsic value, also known as instrumental or utility value, describes a thing’s value as a means to another end (Lemos, 1994; Rønnow-Rasmussen & Zimmerman, 2005), such as its “ability to serve a specified purpose or cause a particular effect” (OED, 2020c). Extrinsic value can be attributed in various ways as a service, a resource or source of knowledge. Importantly, intrinsic and extrinsic value are not mutually exclusive (Kagan, 1998). Take trees for example, trees have intrinsic value in and of themselves; their fruit may have value as food provision; parts of the tree may have properties with medicinal value; their wood may have value as a construction resource; they supply shade; they provide a habitat for animal and plant species; the species of lichens that they host can be indicators of air pollution; they actively contribute to atmospheric processes in CO_2 and oxygen absorption and production; and they have cultural and heritage significance. This illustrates that intrinsic and extrinsic values can coexist and that extrinsic value has many dimensions.

In the Antarctic context, the discussion of value and values in the humanities and social science research community began to attract academic attention when the two terms appeared in the Protocol on Environmental Protection to the Antarctic Treaty (hereafter referred to as the Madrid Protocol and the Protocol). Article 3.1 of the Madrid Protocol states,

> *The protection of the Antarctic environment and dependent and associated ecosystems and the intrinsic values of Antarctica, including its wilderness and aesthetic values and its value as an area for the conduct of scientific research, in particular research essential to understanding the global environment, shall be fundamental considerations on the planning and conduct of all activities in the Antarctic Treaty area. (Protocol on Environmental Protection to the Antarctic Treaty, 1991)*

Rosamunde Codling was one of the first researchers to consider the meaning of the terms used in the Madrid Protocol (Codling, 2001; United Kingdom, 1998). She highlights the fact that they are referred to several times without definition. The ambiguity of the application of the terms presents difficulties in reaching a comprehensive and coherent values statement, yet states are required to implement environmental protections and management regimes based on assessments of these values. Taking up the baton of Codling’s work, the topic of values and the ambiguity of their definition in the ATS provided an impetus for the creation of SSAG. The group’s initial research focus was in part to “understand and anticipate human engagement with and activity in Antarctica in the future” (Liggett & Hemmings, 2013, p. 7). Increasing human presence in Antarctica and the growth of international participation in Antarctic matters necessitates the need for a shared understanding, or “value consensus”, amongst Antarctic Treaty Consultative Parties (ATCPs). This is to ensure agreement on policies and management approaches that defend the principles of Article 3.1 (Liggett & Hemmings, 2013, p. 17). SSAG’s starting point was to catalogue “the range of intrinsic and extrinsic values associated with Antarctica, and assess how the values impact on the level and nature of human activity there" (Nielsen & Philpott, 2018, p. 3). The group's inaugural project brought together scholars of psychology, law, geopolitics, anthropology, environmental management, tourism, literature and sociology. Proceedings of their first workshop are documented in *Exploring Antarctic Values* (2013). The workshop seeded scholarship which has grappled with the understanding and application of value concepts for current and future Antarctic policy and activity. Germane to this thesis, the group acknowledged that there were gaps in the discipline areas that

attended the workshop and were therefore absent from the publication of the conference proceedings (Liggett & Hemmings, 2013). Noting the absence of a visual arts perspective in Antarctic values research, this thesis aims to make a contribution to research and knowledge in this area.

As the work of Codling and SSAG shows, in an Antarctic cultural context, concepts of value are enshrined in the ATS and they function in a number of ways. They establish principles and beliefs; they define the contexts for and boundaries of human activity in Antarctica; they promote ideas of worth; and they influence people's perceptions of Antarctica. A case in point is Article 2 of the Madrid Protocol in which Antarctica is designated a continent devoted to science. The terms value and values are not explicitly used, but their presence is implicit in the ideas communicated. In Article 2 the continent is recognised for its scientific value; science is enshrined as a core principle and an endorsed activity. Hemmings describes science, the preservation of peace, and the abeyance of territorial claims as the "foundational values" of the Antarctic Treaty (Hemmings, 2012, p. 143). With reference to the Protocol, he defines peace, science and environmental protection as a "trinity of...high values", with wilderness and aesthetic values, and earth system scientific research as three environmental "sub-values" (Hemmings, 2012, p. 145). Significantly, several of these values have been utilised within Antarctic Treaty Consultative Meeting (ATCM) Resolutions to provide a rationale for artists' presence, namely scientific, aesthetic and wilderness values, and international cooperation (Resolution 2, 1996; Resolution 5, 2013). The value of art in these Resolutions is defined in instrumental terms, "to promote the dissemination of knowledge about Antarctica" (Resolution 5, 2013), and the "Promotion of understanding and appreciation of the values of Antarctica" (Resolution 2, 1996). The Resolutions reflect and have informed some of the drivers behind NAPs' interest in enabling artists to work in Antarctica and in doing so they confirm how the value of artists and their work was perceived at the time. Notably, both Resolutions define the role of art as promoting and communicating established Antarctic values.

The observation that "Values are at the core in human connection to Antarctica" (Engelbertz et al., 2013b, p. 18), forms part of the rationale and a contextual starting point for this thesis. In the conclusion to *Antarctic Futures*, a publication that explores human activities, their impacts and associated management implications, the authors "strongly recommend",

> *Continued and coordinated studies into the values that different publics and Antarctic Treaty Party members actually associate with Antarctica and into how these values manifest themselves in human behaviour in Antarctica as well as in its governance. (Liggett, Lamers, Tin, & Maher, 2014, p. 336)*

While the ATCM Resolutions cited above suggest that particular value concepts are central to NAP art programmes, my study seeks to understand if there are other value concepts associated with artists and their work. I designed the study to allow multiple perspectives to emerge through adopting three value concepts, a) the intellectual act of recognising and assigning worth to something, b) concepts of intrinsic and extrinsic value, and c) the principles upheld by an individual or group that guide their attitudes and behaviours. Respectively, these concepts relate to the questions, is artists' presence in Antarctica valued, what value is ascribed to Antarctic artists and their work; and what value-based principles are in evidence.

1.3 Sourcing critical analyses of Antarctic art

Art plays a significant role in human descriptions and understandings of Antarctica, and humanities scholars draw attention to social, cultural and political dimensions of art. In so doing they advance our critical understanding of our engagements with Antarctica. As Leane, McGee and Small remind us, humanities analyse "meaning-making practices of human culture, past and present" (Leane & McGee, 2020, p. 6; Small, 2013, p. 23):

> *Researchers in the humanities are ideally placed to draw out, interpret and examine artists' and writers' responses, and to suggest ways in which they connect with other issues...their work can contextualize, analyse and question human interaction with the continent, both now and in the past. (Crane et al., 2011, p. 11)*

In a digital age an artist's website is an immediate source of information about an artist and their Antarctic work. A common format is a portfolio-style presentation of collections of images often accompanied by the artist's biography and a résumé. While these are valuable sources of information, artists' websites rarely include in-depth analysis and contextualisation beyond brief descriptive texts. More commonly, such critical analysis is found within the publications produced to accompany exhibitions, or within artists' post-voyage publications, to which curators and notable humanities scholars are invited to contribute essays (Albuquerque, 2014; Fox, 2008, 2012b, 2014; Glasberg, 2005; Pyne, 2008; Sever, Turner, & Oates, 2012; Wells, 2011). Contributors draw on their area of expertise to situate an artist's work, or exhibition theme, in relation to wider Antarctic historical, cultural, socio-political or environmental narratives.

Exhibitions and publications have also resurrected and celebrated the legacies of artists from earlier periods (Andrews, 2007; Codling, 1997a, 1997b; Gray & Newton, 2001; Krause, Scholl, & Paige, 2004; Millar, 2017). Images and accounts of the *heroic age*[4] are particularly popular, with the work of Frank Hurley[5], Herbert Ponting[6] and Edward E. Wilson[7] having received considerable retrospective attention (Andrews, 2007; Hurley & Rex, 2001; Ponting, Hurley, & Boddington, 1979; Riffenburgh & Cruwys, 1998; Wilson & Wilson, 2011). A certain reverence and enthusiasm exists for the heroic age period that publications, exhibitions and the sale of reprints of historic photographs continue to feed (Bonhams, 2016; Royal Geographical Society Enterprises, 2019; Scott Polar Research Institute [SPRI], 2009). However, some artists and scholars have problematized the period, its culture and its imagery. In particular the construct and operation of colonial heroic white masculinities have attracted analysis and critique (Bloom, 2017; Bloom, Glasberg, & Kay, 2008; Collis, 2004; Glasberg, 2012; Noble, 2014).

Often the occasion of a significant anniversary or the hosting of an international conference will prompt the staging of an Antarctic art exhibition and an accompanying publication. To complement the ATCM XLII in Prague 2019, Czech artist Veronika Podlasová held an exhibition of her polar artwork (Fix, 2020). Xu Yuan Wang presented his work at the ATCM XL in Beijing (Polar Research

[4] Heroic age defines a period of overland exploration into the interior of Antarctica starting in the mid-to-late 19th century and continuing into the 20th century. Captain Robert Falcon Scott, Roald Amundsen, Douglas Mawson, and Ernest Shackleton are some of the most well-known protagonists of the period.

[5] Photographic artist Frank Hurley accompanied Douglas Mawson's Australasian Antarctic Expedition in 1911-13 and Ernest Shackleton's Imperial Trans-Antarctic Expedition in 1914-17.

[6] Herbert Ponting accompanied Captain Robert Falcon Scott's Terra Nova Expedition, 1910-12 an aim of which was the reach the South Pole. Scott died on the return journey from the Pole. Ponting was not a member of the South Pole party and therefore survived the expedition.

[7] Along with Ponting, Edward Wilson also accompanied the Terra Nova Expedition. However, Wilson was a member of the South Pole party and he perished with Scott on the return journey from the Pole.

Institute of China, 2017a, 2017b) and in the public programme of *POLAR2018,* the Open Science Conference of SCAR and the International Arctic Science Committee (IASC) (SCAR/IASC, 2018). The artist David Paige, who accompanied Admiral Richard Evelyn Byrd's second (US) Antarctic expedition 1933-35, was remembered in an exhibition and publication complementing the ATCM XXVIII (Krause et al., 2004). Similarly, during the ATCM XXIX in Edinburgh 2006, the UK presented *White Horizons* charting British art in Antarctica from 1775-2006 (Walton & Pearson, 2006). Six years later, on the centenary of Captain Scott's death during his South Pole expedition, *Landscapes of Exploration* marked the occasion with an exhibition and publication celebrating the British Antarctic Survey (BAS) NAP art programme alumni (Walton, 2012). Alfons Hug, curator of the 2007 *2nd Biennial of The End of the World*, published *Arte da Antártida* (Hug, 2009) to document the Antarctic work from the 1st and 2nd editions of the South American biennale event. *Antarctica,* an exhibition of seven artists from Australia, the UK and New Zealand, complemented the *Anthropocene Humanities* conference of the Consortium of Humanities Centers and Institutes in Canberra (Sever et al., 2012). However, Leane raises a concern that "events designed to highlight creative responses to the continent, such as art exhibitions...rarely incorporate related academic research" (Crane et al., 2011, p. 10). This said, in addition to publications discussing individual artist's work, there are notable exhibitions and publications that have contributed to or complemented academic inquiry.

Rachel Weiss pioneered the multi-disciplinary Antarctic art and science exhibition and publication model with *Imagining Antarctica* (1986). Weiss's work provided a springboard for further examinations. Just over twenty years later, marking the International Polar Year (IPY) 2007-08,[8] Weiss was one of the contributors to *Polar: Fieldwork and Archive Fever*, a multi-disciplinary Antarctic arts, humanities and natural science symposium that resulted in the publication *BiPolar* (Yusoff, 2008). In a similar vein, *Landscapes of Exploration* complemented the *True South* symposium that brought together artists and scientists to examine Antarctica's scientific, environmental and philosophical significance (Coslett, 2012). Two notable examples of curated group exhibitions, with accompanying publications, that have sought to advance critical engagement and interpretations of Antarctica through art-based academic inquiry are *Breaking Ice*, curated by Sophie McIntyre for the Adam Art Gallery | Te Pātaka Toi, Wellington, New Zealand (McIntyre, Remer, & Stark, 2005), and *Vanishing Ice*, curated by Barbara Matilsky for The Whatcom Museum, Bellingham, USA (Matilsky, 2013). *Breaking Ice* was a critique of visual representations of Antarctica. The curator set out to deconstruct and question ways of representing the continent, which historically has tended to be mythologised through imagery and art. Elena Glasberg, a humanities scholar who travelled to Antarctica through the NSF art programme, contributed to the *Breaking Ice* publication. She writes, "Envisioning – the act of seeing and the creation of representation – is more challenging in Antarctica" partly because the extreme environment "deranges vision", but also because the historic cultural and political narratives shape perception (Glasberg, 2005, p. 9). *Vanishing Ice* is an exposition of climate change examined through historic and contemporary polar and alpine visual art (Matilsky, 2013). The blend of contemporary art and environmental activism are long-standing interests of Matilsky's (Matilsky, 1992). The exhibition and publication, which includes the work of seventy-five artists from twelve countries and four continents, is the result of seven years of research, and aims to "expand people's understanding of the implications of a changing planet, and the role of the arts in increasing our awareness" (Leach, 2013, p. 70). Over a four-year period the exhibition toured six North American venues. A dedicated website makes the exhibition content and environmental data available to a global audience (Matilsky, 2018). The latest iteration of an

[8] IPY 2007-08 was a programme of research, education and outreach focussed on understanding the Polar Regions. Although it is referred to as a "year", several IPY projects extended into 2009. Some publications refer to the period as the "International Polar Years 2007-09" (Headland, 2009).

exhibition/art-based Antarctic inquiry is entirely web-based. The recently established *Antarctic Artists and Writers Collective* (AAWC), comprised of the NSF Antarctic artists and writers alumni, staged their inaugural online exhibition *Adequate Earth* in January 2021 (Antarctic Artists and Writers Collective [AAWC], 2021).[9] The exhibition summarises the history of the NSF art programme and introduces the work of the 13 founding artists of AAWC through a curatorial framework of four themes: visual dissonance and artistic practices, turning space into place, exploring the natural laboratory, and stories of change (AAWC, 2021). Reflecting the group's mission to "inspire and educate the public about Antarctic and its scientific exploration through collaborations in the arts" (AAWC, 2020), the exhibition discusses relationships between science and art and how artists have sought to make sense of Antarctica in a changing world. The exhibition has a retrospective emphasis, meeting the group's aim to "exhibit the history" of the NSF art programme (AAWC, 2020). Entering the third decade of the 21st century prompts the question, what will come next in the field of art-based Antarctic critical inquiry.

1.4 Chronological contextualisations

Often scholars will incorporate a chronological element to contextualise their analysis, tracking the artists' role and their work in relation to the wider cultural, technological, political, historic, and environmental contexts (Andrews, 2007; Fox, 2005b; Guthridge, 2008; Matilsky, 2013; Pyne, 1986; Walton, 2012; Walton & Pearson, 2006; Wells, 2012). William L. Fox, director of the Center for Art + Environment at the Nevada Museum of Art and NSF recipient, developed the *Antarctic Image Chronology* (Fox, 2009) which formed the basis of his historic research for *Terra Antarctica* (2005b). Fox's intention was to distil a narrative charting the development of Antarctica in images, from an imagined space drawn on maps to a knowable place through a myriad of imagining technologies. His chronology starts with Anaximander of Miletus 550 B.C. and continues through to the deployment of satellite imaging (Fox, 2009). Although Fox's chronology is incomplete (Walton, 2012), it remains a substantial contribution towards a baseline understanding of the development of Antarctic visual cultural history. However, this is not to say that there is a single coherent historical narrative. The curation of *Breaking Ice* challenged ideas of logical chronologies in the cultural representation of Antarctica. Glasberg highlights the multi-dimensional perspectives in viewing, interpreting and critically representing the continent, arguing that Antarctica's visual history cannot be seen as a straightforward progression of fact. It is more accurate to think of its artefacts and associated knowledge and ideas as "assemblages", or "accumulations", contingent upon where and how they are contextualised (Glasberg, 2005, p. 10). The complexity of multiple narratives makes it difficult, and undesirable, to distil Antarctic visual cultural history into a coherent single history or meta-narrative. This said, chronological charting does provide a starting point for analysing and interpreting the multiple and complex narratives. For this reason, collating an artist chronology was an important element of my research.

1.5 Themes and perspectives in critical analysis

Humanities scholarship has provided a number of important critical examinations of Antarctic art and culture. As the first humanities scholar supported through a NAP art programme, Pyne's work

[9] Presenting *Adequate Earth* wholly online is a pragmatic solution to maximising audience reach, building a digital resource, and working within the social restrictions in response to the Covid-19 pandemic that began in 2020.

has been a touchstone for many who have followed. Fox considers *The Ice* to be "one of the best books written about [Antarctica]" (Fox, 2005b, p. 83). Similarly, the author of *Antarctic Eye* (Andrews, 2007), Lynne Andrews believes Pyne's work to be "one of the most perceptive discourses on Antarctic art" (Andrews, 2007, p. 25). Others have been more critical, including environmental historian Donald Worster who suggests that *The Ice* has "more flaws than an ablating flow", but he credits Pyne's account of how perceptions of Antarctica have evolved as being, "original and valuable" (Worster, 1987). Irrespective of whether one agrees or disagrees, published over 30 years ago Pyne's is no longer a contemporary assessment. Writing in the 1980s Pyne's work touches on the beginning of the NSF art programme, but it does not offer critical insights into artists' responses beyond that time. Through his critique of Lita Albuquerque's 2006 land art installation *Stellar Axis* (see Chapter 4 Figure 12, p. 50 and Figure 13, p. 52), Fox challenged Pyne's earlier observations that modern art is incompatible with the Antarctic context (Fox, 2012a). Fox himself has written a cultural history of Antarctica that equals Pyne's. In *Terra Antarctica* (2005b) he explores the development of human cognitive understandings and representations of the Antarctic environment through art and imagery. Although his account does not extend far into the 21st century, his assessment argues that the visual arts and the creation of imagery have a significant role in how the world is interpreted and understood.

Sharing some similarities with aspects of Fox's appraisal, Kathryn Yusoff discusses the peculiarities of cognition in Antarctica (Yusoff, 2005). For Yusoff, the combined phenomena of light, atmosphere, ice and space that create distortions and illusions serve as metaphors for how perception and representation is malleable (Yusoff, 2005). The ideas of distortion and malleability are expanded further in Glasberg's analysis *Antarctica as Cultural Critique* (2012), where she discusses a selection of historic and contemporary photographic artworks, highlighting what is depicted in and absent from the images. Her critique reveals how the photographer constructs and influences ideas and understandings of Antarctica. Glasberg's astute observation that Antarctica is "the most mediated place on earth" (Glasberg, 2012, p. xix) is one that other scholars have cited to contextualise their own discussions of Antarctic art and imagery (Salazar, 2017), and it is one that is relevant to this thesis. Viewing art and imagery is the closest that many people will come to seeing Antarctica. Not only does this have implications for how art is valued, it also emphasises the centrality of constructed representations in our perceptions and understandings of Antarctica (Leane, 2011a, 2011b).

Scholars have examined from varying angles the power that art and images have in constructing and communicating ideas that define Antarctica. Yusoff draws attention to the use of images in Antarctic environmental campaigns and media representation, highlighting the power of images to inform and influence public perceptions (Yusoff, 2005). She describes how this prompted NAPs, "to invest heavily in the imaging of Antarctica...to wrestle control back from their critics" (Yusoff, 2005, p. 116), a consequence of which was a narrowing of artists' remit and marginalisation of critical artistic practice. With reference to Weiss' project *Imagining Antarctica* (Weiss, 1986), Yusoff suggests that arts and humanities scholars only achieve criticality when "unrestrained by national patronage" (Yusoff, 2005, p. 117). Observing that "the geopolitics of knowledge of the Antarctic is...intimately related to the politics of its representation" (Salazar, 2017, p. 125), Juan Francisco Salazar highlights some of the complexities in the geopolitical nature of representation. His broad-ranging discussion traverses topics including scientific imaging and environmental narratives, representing Antarctica through immersive installations, concepts of Antarctic habitation, the disruption of boundaries, and the multi-layered and entangled nature of meaning making and representation in the digital age (Salazar, 2017). Lisa Bloom offers a postcolonial feminist perspective. Although her pioneering work *Gender on Ice* had a predominantly Arctic focus, Bloom's observations on the operation of

masculinities in polar history and cultural representation are apparent also in Antarctic cultural history. In more recent writings Bloom focusses on the Antarctic (Bloom, 2017, 2020). Her textual analyses of the work of Judit Hersko, Anne Noble, Joyce Campbell and Connie Samaras not only highlight and address the invisibility of women in Antarctic culture, but she also draws attention to how the artists challenge masculine, colonial and neo-liberal narratives (Bloom, 2017, 2020).

In the conceptual framings of Antarctic art and scholarly critique during the 21st century, a focus on anthropogenic climate change has increased in prominence. The edited collection *Far Field* is an example of this. With a particular focus on digital culture and new media technologies, the book revolves around the significance of both Polar Regions to climate change (Marsching & Polli, 2012). Contributors include humanities scholars and artists from various disciplines. Judit Hersko's contribution is an art project in its own right, and one which Bloom has examined through feminist critique (Bloom, 2015). Artist Simon Faithfull's chapter contains diary excerpts and digital sketches from his *Antarctic Dispatches* series, which were emailed and exhibited in the UK simultaneous with his residency with BAS in 2004/05. Fox's contribution situates the work of Lita Albuquerque in an art historical context through aligning the history of artists in Antarctica with technological developments and the emergence of land art in culture and on the continent (Fox, 2012a). Susan Ballard, whose scholarship combines art history with environmental humanities, frames her discussion around difficulties of comprehension. Resonating with the ideas of Fox and Yusoff, Ballard suggests that the continent "continually evades knowing" but that art has a role in "helping to understand Antarctica" (Ballard, 2012, p. 170). As a counterbalance to conceptualisations of nature that risk creating a sense of distance or disconnect between humans and nature, Ballard speaks of artists paying direct and close attention to place, experience, time and relationship (Ballard, 2012). For her, artists allow the immensity of nature to be recognised alongside "a notion of ecology where the human is deeply embedded within the context and actions of the environment" (Ballard, 2012, p. 183). Similarly concerned with human and environmental interrelationships is *Anthropocene Antarctica* (2020). With contributions from humanities, law and social science scholars, the collection explores geopolitical, cultural and socio-political dimensions of human engagements with Antarctica (Leane & McGee, 2020). Despite the fact that the three chapters grouped under the heading "cultural texts and representations" do not discuss visual art specifically, the contextual and conceptual framing of the book is entirely relevant to Antarctic visual art. Indeed, some of the themes identified within *Anthropocene Antarctica* are mirrored in the themes that emerged within my research. The ideas of "Antarctica as vulnerable" to human impact and activity and "Antarctica as threat" due to the global consequences of accelerated ice melt (Leane & McGee, 2020, pp. 187-189) echo the concerns of many of my research participants.

1.6 A missing international perspective

A national emphasis is a common feature in Antarctic art literature. Andrews' *Antarctic Eye* (2007) discusses the UK and Australia. In their postgraduate dissertations, Laura Taylor (2009) and Tim Jones (2011) focus on New Zealand's story; and the UK is the focus in *White Horizons* and *Landscapes of Exploration* (Walton & Pearson, 2006; Wells, 2012). *Antarctic Artists and Writers* (National Science Foundation [NSF], 1993) represents the artists from the first decade the US NSF art programme. Breaking the mould, artist and the former Head of Cultural Projects Andrea Juan, who managed the Argentinian Dirección Nacional del Antártico (DNA) NAP art programme, introduced an international emphasis both in the art programme and in the series of *Sur Polar* exhibitions that she curated. Indeed, the Argentinian ATCP delegation put forward the proposal for Resolution 5 (2013) in which international cooperation was embedded as a core value of NAP art projects (Argentina,

2013). The *Sur Polar* exhibitions were not limited to DNA art programme artists; Juan presented the work of other artists from around the world who were producing new Antarctic artwork at that time. However, the literature documenting the DNA art programme is limited to a series of exhibition catalogues. Although these are a useful resource for understanding the curatorial emphasis of the *Sur Polar* exhibitions (Juan, 2008b, 2010, 2011, 2012, 2014, 2015, 2016, 2017), beyond listing the nationality of each artist there is no explicit critical discussion of the international dimension of Antarctic culture.

The literature emphasises that an analysis of the international dimensions of Antarctic cultural heritage is missing. Indeed, the authors of *White Horizons* acknowledge that "There is much still to be learned from a critical examination of Antarctic art, especially in an international framework" (Walton & Pearson, 2006, p. 4). Similarly, in his reflections on the emergence of Antarctic humanities where he provides a partial account of the development of NAP art programmes, Aant Elzinga calls for an internationally-focussed comparative analysis to understand the "orientations", "roles", and "arguments used to promote" NAP art programmes (Elzinga, 2016, p. 282). These observations, indicating an area where a contribution could be made, initially inspired the idea for this thesis. Although the study is not a comparative analysis of NAP art programmes in the terms Elzinga advocates, representatives of NAPs participated in the research and the thesis contributes significantly to examining the interests and agendas of NAPs that support, or have supported, art programmes.

To date there has not been an examination of Antarctic art or artists' presence from an international perspective. An international focus is a principal feature of this study. This emphasis recognises that culturally, geopolitically and environmentally Antarctica is an international space. The framing of Antarctica as an international, or global, common pool resource domain assumes that some, or all, nations are entitled to a stake in Antarctica (Buck, 1998), and from an environmental perspective, changes in Antarctica due to global warming are predicted to affect all nations and their peoples. There are three aspects to the international focus in the study. The first is the range of international representation in the participant cohort. The second is a compilation of the number and nationality of artists who have worked in Antarctica since 1955. Finally, the selection of and reference to artists and their work throughout the thesis reflects the cultural diversity of the Antarctic artists alumni.

The discussion on themes and perspectives in critical readings outlined above demonstrates that a range of contextual framings have been brought to bear on Antarctic art including cognition, perception and knowledge, gender, geopolitics and environmental critique. To varying degrees, these framings were all reflected in the research data. However, the cultural diversity of the artists, which surfaced as a significant finding in this study, has not received significant attention in the scholarly literature to date. There is a small but growing number of critical historically-focussed examinations of Antarctic cultural *whiteness* (Mancilla, 2019; van der Watt & Swart, 2016), but there has not been any critical assessment of the diversity of cultural representation in the 21st century Antarctic artists alumni. Diversity of nationality and culture are important factors because the artists' responses to, and representations of, Antarctica will reflect aspects of their own culture, values, and beliefs. The significance of this is clear when considered through a geopolitical and socio-political lens; questions of who has access to Antarctica, whose culture is represented and whose values and beliefs are represented in Antarctic art are prompted. As an internationally-framed study the thesis allows these questions to be explored.

1.7 Structure of the thesis

Including this introduction, this thesis has ten chapters. The first two provide contextual, theoretical and methodological positioning. Chapter 1 has introduced the rationale for the study and its positioning in the field of Antarctic humanities while Chapter 2 outlines the methodological paradigm within which the research sits. It also details the research methods, participation demographics and the data analysis processes. Chapters 3 and 4 focus on various aspects and issues of artists' presence. Chapter 3 extends the contextual framing of the thesis, through a summary of the historic and contemporary contexts for artists' presence in Antarctica, and an analysis of artist numbers since 1955 according to their nationality and the state origin of their supporting agency. Chapter 4 discusses the current avenues of access open to artists and factors that enable them to work in Antarctica. Chapters 5 to 9 combine interview and survey data analysis with theoretical discussion and critical readings of specific artworks. Each of these chapters is organised according to a major theme that emerged from the data. Chapter 5 has a socio-political emphasis, exploring the topics of cultural diversity, race and gender, while in Chapter 6 the focus in on the manifestation of geopolitics within Antarctic art. Chapter 7 examines art as a form of knowledge and way of knowing, and considers the contribution art offers on a continent devoted to science. The environment at a local Antarctic level and from a planetary perspective is the theme of Chapter 8. The emphasis is on communication and exploring the role of artists and their work in public engagement in Chapter 9. In Chapter 10 the key contributions of the study, a synthesis of the main findings in relation to the research questions, and an outline of areas for further work conclude the thesis.

2 Methodology, research methods and participation

This chapter provides an explanation of the paradigmatic and methodological positioning of the study, examining the implications of my worldview in relation to research paradigms and their corresponding ontological and epistemological assumptions. Opening with a description of the research questions, the chapter goes on to describe the selected research methods. The processes involved in inviting participation are discussed, including an analysis of the extent and demographics of participation. The chapter concludes with an explanation of the approach and processes I adopted to analyse the data.

2.1 The focus of the study and the research questions

In designing this study I set out to understand how contemporary visual artists working in Antarctica are perceived in relation to three key factors:

- The value of their presence
- The value of their work
- The values explicit and implicit in their presence and their work

Equally, I was interested in people's criticisms of artists' presence and what these contributed to understandings of value and values. As multiple interpretations of value are possible, there was potential for a range of ideas and definitions to emerge through the study. Therefore, the research approach had to accommodate a plurality of perspectives, which suggested that a qualitative methodology and the use of research methods that incorporated open-ended questions would be appropriate. Through an examination of the ideas and definitions of value and values distilled from participants' responses, the research aims to answer the overarching question,

- **How can the value of contemporary visual artists working in Antarctica be described and understood?**

Considering that most people's perceptions of Antarctica are formed not through first-hand experience but through seeing and reading other people's representations, art contributes to informing and influencing public understandings of Antarctica. Recognising that artworks are constructions based on the maker's worldview, and also recognising that audiences bring their own interpretations to those artworks, a supplementary research question is,

a) What do artists contribute to our knowledge and understandings of Antarctica?

The thesis has a 21st century focus, as the emphasis is on understanding current perspectives of contemporary Antarctic activity. Acknowledging that there is scope for the findings of the study to contribute to how the value of artists and their work is perceived, which may in turn influence how artists are supported, a second supplementary question is,

b) What are key considerations for the future of artists working in Antarctica?

The relevance of this question came into focus during the analysis of the chronology of artists' presence, as the numbers and the cultural diversity of artists working in Antarctica has changed significantly over the last 20 years. Reflecting on the recent past and the current situation of artists' presence in conjunction with perceptions of the value of artists and their work may be used to inform immediate and longer-term developments.

2.2 Inquiry paradigms and theories of reality and knowledge

My decision to use semi-structured interviews as one of the research methods was made in the early stages of the study before I had fully articulated an ontological, epistemological and methodological position. To properly position the study in relation to research paradigms and research practices, I undertook an exploration of the various paradigms and their theoretical foundations. The starting points for this were the fundamental ontological and epistemological questions of "what my belief is about the nature of reality" and "how I believe this reality can be known". Understanding where my research sat in relation to these paradigms was not immediately apparent or straightforward. I concluded that the study did not fully sit within one paradigm; it sat partially in two. What follows is an account of the development of my thinking in relation to the theoretical positioning of the study.

2.2.1 A journey into worldviews and paradigms

Taking the broad definition of a paradigm as "a discipline's general orientation or way of seeing its subject matter" (Vogt & Johnson, 2015, p. 310), and accepting Kuhn's thesis of paradigm shifts (Kuhn, 1962), indicates that there are different, competing, incommensurable ways of viewing the world. The significance of these differences is revealed when looking at the worldview contained within an inquiry paradigm. Worldviews, i.e. beliefs about the nature of reality (ontology), and the theories of knowledge that propose how this reality can be known (epistemology), vary tremendously between paradigms and have implications for research methodologies and the choice of research methods.

A consequence of Kuhn's revolutionary paradigm shift thesis (Kuhn, 1962) was the recognition of the existence of other inquiry paradigms and associated ontologies and epistemologies in which different versions of truth and reality exist. The four generally recognised paradigms are positivism, post-positivism, critical theory (and related ideological positions) and constructionism (Guba & Lincoln, 1994). Lincoln points out that,

> *Accommodation between paradigms is impossible. The rules for action, for process, for discourse, for what is considered knowledge and truth, are so vastly different that, although procedurally we may appear to be undertaking the same search in fact, we are led to vastly diverse, disparate, distinctive, and typically antithetical ends...The thoroughly universal nature of any paradigm eventually forces the choice between one view or the other. (Lincoln, 1990, p. 81)*

Drawing on the work of Guba and Lincoln (1994), Haase (2008) extended the ontological, epistemological and methodological summaries of each of the four paradigms, shown in the first four columns of Table 1. Guba suggests that "none of these is the paradigm of choice" (Guba, 1990a, p. 27) but argues that, eventually, choosing between them is essential. However, others take an alternative view. Quoted from Mertens (2015), the fifth column of Table 1 expands and challenges the paradigm framework through introducing a "pragmatic" approach, which advocates the legitimacy of recognising aspects of more than one paradigm. A pragmatic approach enables a researcher to choose and mix methods as appropriate to answering their research question. Methodologies are all "paths to inquiry" (Schwandt, 1990, p. 258), and a research design can plausibly draw on different methodologies to frame interpretation and create knowledge.

Table 1. Major paradigms and their associated belief systems

	Positivism	**Post-positivism**	**Transformative** **Critical Theory** (and related ideological positions)	**Constructivism**	**Pragmatic**
Ontology	*Realist* Naïve realism – there is a real reality out there, driven by natural laws, that can be studied	*Critical realist* There is a real reality out there, driven by natural laws, but it cannot be completely understood – only probabilistically	*Critical realist* Historical realism – over time reality has been shaped by socio-cultural, political, economic and ethnic values	*Relativist* There is not one, but multiple subjective-objective realities out there, all of which are constructions created by the mind and given a cosmos	There is a single reality and individuals have their own subjective interpretation of reality
Epistemology	*Objectivist* A researcher can and has to adopt a distant and ono-interactive stance to obtain value-free and unbiased results	*Modified objectivist* Ideally objectivity is to be achieved, but the influence of the researcher on the findings is acknowledged	*Subjectivist* Value-driven inquiry with the research process strongly related to the values of the researcher	*Subjectivist* Findings of research are regarded as the product of the interaction between the researcher and the researched	Relationships in research are determined by what the research deems as appropriate to the study
Methodology	*Experimental/manipulative* Inquiry pursues the aims of verifying/falsifying hypotheses stated in advance	*Modified experimental* Inquiry uses multiple methods, possibly incl. qualitative methods, to critically verify/falsify hypotheses	*Dialogic/transformative* Inquiry shaped by the aim of using dialogue to transform the views of participants, to eliminate false consciousness	*Hermeneutic/dialectic* Consideration, hermeneutic refinement and dialectic comparison of a range of individual constructions with the aim of generating one or a few constructions that are relatively consensual	Methods matched to the specific questions and purposes of the research; mixed methods can be used; research may work between various approaches

Note: The sources for this table are the tables *Enquiry paradigms and their belief systems* (Haase, 2008, p. 17) and *Basic beliefs associated with the major paradigms* (Mertens, 2015, p. 11).

2.2.2 A personal ontological position

To determine a research methodology, I began with articulating my own worldview on the nature of reality and knowledge in order to explore the ontological and epistemological implications for this study. Whilst I consider that a physical world, or a material reality, exists that can be experienced through the senses, I would also argue that human understanding of the world is constructed in our minds and that meaning is not fixed universally. Furthermore, there are social and cultural dimensions to the construction of reality, which also are not fixed. As May and Perry point out,

> *So much of what we see and do is informed by the spheres of perception through which we make sense of the world around us. The conceptual, physical and social spaces that we carry around with us are constantly in the process of being renewed and inform how we are in the world. (May & Perry, 2017, p. 4)*

I agree with definitions of reality that recognise that constructions of ideas, beliefs, meaning and knowledge are subjective and that individual processes are deeply influenced and informed by external stimuli, social exchanges and other socio-cultural, political and economic factors (Berger & Luckmann, 1967). From an early age, influences such as family, friends, community, media exposure,

education, and other institutions are all significant in shaping a person's perspectives and beliefs (Bronfenbrenner, 2005). Furthermore, there are socio-cultural, political and economic factors and structures that not only shape and define people's experience and perception of reality but also create and reproduce power differences between people within societies (de Beauvoir, 2010; Freire, 1996). Unquestioned norms, values and beliefs within a society or culture can disguise, or present as natural, power inequalities that exist between groups of people (Freire, 1996). People may unconsciously participate in constructing and perpetuating a socio-cultural, socio-political reality (Berger & Luckmann, 1967), but as beings with agency we have the capacity to consciously challenge social and cultural constructions of reality. In my view, reality can be interpreted in different ways; multiple complementary and contradictory worldviews exist. Personally, I do not subscribe to a view of the world and its material reality, or its origins and social organisation, based on any religious doctrine. Neither do I subscribe to the view that reality can be wholly known through scientific inquiry. As sophisticated as human intelligence may be, our perceptions and understandings of reality are limited to and by our human capacities. Furthermore, as cultural beings, our inquiries into and conceptualisations of the nature of reality are unavoidably culturally situated, hence a multiplicity of perspectives exists. When considered in relation to the inquiry paradigms in Table 1, my personal view of reality reflects both critical theory and constructivist ontologies.

2.2.3 Situating the study in relation to inquiry paradigms

In relation to the focus of the study and how this corresponds to inquiry paradigms, this thesis is concerned with judgements regarding the intrinsic and extrinsic value of Antarctic art, as well as the principles and beliefs that people hold. Such value concepts are intangible constructed ideas that are reflected and enacted through language, attitudes and actions. Value designations and values vary from person to person; they are subjective and socio-culturally diverse across time and space. As subjective concepts that lie within social, cultural and psychological dimensions of reality, value and values cannot be objectively measured or understood through a fact-based inquiry, because an objective singular truth does not exist. This multiplicity is one of the interesting and appealing aspects of a study exploring perceptions and concepts of value. A research approach that recognises the subjective nature of knowledge was required. The aims of this study and the interpretive nature of knowing and knowledge correspond most closely with a constructivist inquiry paradigm, which recognises a diversity of perspectives and disputes the idea of a singular meta-narrative. A constructivist worldview recognises that value and values exist only in the subjective, internally created realities of the mind (Lincoln & Guba, 2013). For the constructivist, meaning is not fixed or universally agreed, there are multiple truths. "Knowledge is not 'discovered' but rather *created*, it exists only in the time/space framework in which it is generated" (Lincoln & Guba, 2013, p. 40). Interpretation is the vehicle for understanding and knowledge creation in a constructivist paradigm.

As the analysis in this study is reliant on the interpretation of interviews, surveys and artworks, a hermeneutic approach, which derives knowledge from interpretation, is appropriate. Zimmermann describes hermeneutics as "the art of understanding," suggesting that "one is engaged in hermeneutics whenever one tries to grasp the meaning of something" (Zimmermann, 2015, p. 2). In their *Constructivist Credo* Lincoln and Guba conclude that hermeneutic dialecticism is the "methodological presupposition of constructivism" (Lincoln & Guba, 2013, p. 40). Knowledge is a result of processes of interaction and interpretation between the researcher and participants where channels of communication are open between them:

> *Individual constructs are elicited and refined hermeneutically, and compared and contrasted dialectically, with the aim of generating one (or a few) constructions on which there is substantial consensus. (Guba, 1990a, p. 27)*

Although Guba suggests that hermeneutic dialecticism epitomises a constructivist methodology, a dialectical approach was not appropriate in some aspects of my study. To explain, in an art gallery setting I asked participants for their responses to the artwork on display but I did not share my own responses as I was not seeking to secure an agreement on the meaning or interpretation of the artwork. On the contrary, the intention was to understand each participant's individual response. This said, there were some elements of exchange. I sought clarification from participants when the meaning was unclear in the idea they were expressing, and they had the opportunity to review and amend their interview transcript to ensure the text represented their ideas. However, they did not take part in the interpretative analysis of the interview data as a whole; this analysis and interpretation was my own. Having said this, there were two exceptions. I shared a draft of one of the chapters with one of the participants. I invited their critical review as they had personal knowledge and lived experience of some of the issues the chapter explored. The intention here was to check, refine or revise the framing, the construction, the language and the representation of ideas with someone more knowledgeable and experienced than I. Similarly, I shared two chapter excerpts that discussed a specific project with the research team who were leading the project. I invited their critical review to ensure that I represented their work and ideas accurately and appropriately.

The overarching research approach I have taken is hermeneutic with some dialectical elements. For this reason, the study predominantly fits within the constructivist paradigm. There is, however, a specific analytical approach I have chosen to adopt from the critical theory paradigm. An important element of Chapters 5-9 is a textual analysis of artworks that illustrate or advance the ideas under discussion. As an approach used to interpret art and art histories, textual analysis through deconstruction has a particular relevance to this study. Deconstruction is a methodology associated with the critical theory paradigm where reality is perceived as shaped by socio-cultural/political factors. A central tenet of deconstruction is that the artist's intention is not the only source for understanding the meaning of an artwork. Furthermore, a viewer brings their own socio-cultural/political positions to their interpretation of art. Therefore, multiple interpretations of a cultural text are possible (Derrida, 1981). As a theoretical approach deconstruction is commonly used to critically analyse cultural texts (Given, 2008). As described in Chapter 1, it is humanities scholars' critical analysis and interpretation that brings to the fore the socio-cultural/political readings, meanings and understandings of art. Therefore, I use deconstruction to critically discuss artworks in relation to the themes that emerged from the data analysis.

2.3 Identifying bias in interpretation and knowledge creation

Although I have agency and the ability to question socially and culturally constructed narratives of reality, I recognise that am also deeply influenced by social and cultural experiences, which will have created biases in my thinking, many of which I am unaware of. My conscious and unconscious biases have undoubtedly had some influence on the research processes, the interpretation and analysis of data, and findings of this study (Ezzy, 2002). In response to May and Perry's observation that "Reflexivity is not just about the ability to think about our actions...but an examination of the foundations of frameworks of thought themselves" (May & Perry, 2017, p. 3), I have endeavoured to adopt and demonstrate a reflexive approach in the conduct of this study. My socio-cultural experiences as a white Western woman from a working-class background have contributed to

shaping my experiences and perceptions of the world. Access to higher education has enabled me to engage critically with socio-political issues such as colonialism, race and gender, which has given me some understanding of how constructs of power create and perpetuate inequality, and how they have oppressed a diversity of cultural narratives. This knowledge and my cultural background contribute to my critical evaluation and interpretation of the findings in this study. My ontological worldview is another area of conscious bias. Of particular relevance is my recognition of the social and cultural construction and interpretation of the world. This enables questions to be asked about our knowledge and understandings of Antarctica, and allows dominant beliefs and ideas to be critically examined.

In terms of methodological choices that I have made in designing this study, there are two elements of note. First, in an effort to reflect the international and cross-cultural nature of the scope of the research, the study aims to represent a diversity of viewpoints through enabling multiple interpretations and definitions of value to be expressed. Second, the study recognises interpretation as a valid basis of knowledge creation, and it recognises that both the participants and I are active in the process of constructing meaning and understanding. Linking back to the influence of bias, it is unavoidable that our ideas and interpretations are influenced and informed by our own identities and socio-cultural viewpoints.

2.3.1 An artist's perspective

A third potential site of bias is my professional background and experience. I am a visual artist and I have worked in Antarctica regularly since 2013/14. It is worth noting that I have not worked in Antarctica in a role where art-making was my primary occupation. I am one of many artists who have secured a route to Antarctica where art-making was not the role I was employed to fulfil. I have worked as an expedition photographer and nature guide on board Antarctic cruise ships, and as base leader and conservation field assistant for the UK Antarctic Heritage Trust (UKAHT). Since 2013 I have produced artworks in response to my critical engagements with and observations of Antarctica's natural and cultural environments (Jackson, 2018a). I continued to make art in parallel with the research for this thesis. The project that I worked on from 2017 to 2020 was *Antarctic Sun Lines*, a series of Antarctic solargraphs created using a pinhole camera and extremely long exposure times to record images of the sun at locations across the continent. Although I began creating solargraphs in Antarctica during the summer season 2015/16, it was an international collaboration of Antarctic organisations, researchers, and base personnel that saw *Antarctic Sun Lines* grow into a pan-Antarctic project in 2017. Over 40 organisations and over 70 individuals representing 28 states participated. During the 2018/19 season, with the support of the Council of Managers of National Antarctic Programs (COMNAP), the New Zealand and the UK Antarctic Heritage Trusts, and scientists from the University of Canterbury in New Zealand, over 100 solargraph cameras were distributed to research facilities, heritage sites and deep-field locations across Antarctica. The project is discussed in detail in the forthcoming publication *Antarcticness* (Jackson, 2021). The solargraph images were recorded by proxy with the collaboration and support of the wider Antarctic community. The project did not necessitate me travelling to Antarctica.

It would be understandable in the light of my experience to assume a bias in favour of artists working in Antarctica. However, my position is much more nuanced than this. Over the seasons that I have worked in Antarctica I have used my art practice to explore and endeavour to reconcile some of the environmental contradictions I feel about travelling there. My position on human presence in Antarctica is conflicted and unresolved. I entered this research project seeking to interrogate and understand the value of artists working there. Furthermore, I sought to keep my own art practice

separate from study. I consciously chose not to pursue a practice-based PhD. My interest in undertaking this doctoral study has been to fuse my interests in visual art and Antarctica through deepening my understanding of the interrelationships between the two and how the public, the Antarctic research community and the arts community view Antarctic art. Underpinning this study is my interest in understanding perceptions of and attitudes towards art in an Antarctic context.

2.4 Planning and preparing for participation

To ensure the representation of a range of perspectives, I identified the need to involve participants from different professional groupings with Antarctic interest and experience. Below I list those that I deemed it important to include and the rationale for each. With the international emphasis of the study in mind, I sought to achieve representation of each of the groupings from all continents outside of Antarctica and from a number of countries within each of the six continents. The participation numbers and demographics are discussed later in this chapter.

Senior representatives of Antarctic organisations (including managers and former managers of Antarctic art programmes)*:* Artists who have the opportunity to visit and work in Antarctica often do so with support from NAPs or other Antarctic organisations. These organisations are often gatekeepers to accessing the continent. To reach an understanding of organisational perspectives, the research required the participation of senior representatives from these organisations.

Antarctic researchers*:* It was important to capture the views of non-arts researchers who could share opinions and experience from a knowledgeable Antarctic position outside of the arts. Further, several artists collaborate with and take inspiration from Antarctic researchers, which added another dimension to why their perspectives were important. Most of those who participated in the research worked in a natural science discipline; only two worked in a social science or humanities capacity.

Artists: I sought to engage artists who had experience working in Antarctica as they could speak from a place of experience rather than imagination.

Cultural professionals (including curators, funders, art dealers, archivists): Capturing the views of cultural professionals was important for gaining an understanding from a broader cultural and professional perspective.

The public (with neither Antarctic nor art experience necessarily required): The inclusion of members of the public was essential to examine and understand perspectives from outside of any professional or institutional agendas. The views of visitors who had attended an exhibition of contemporary Antarctic art were sought to gain insights into public responses to Antarctic art.

2.4.1 Ethics, consent and confidentiality

The Human Ethics Committee (HEC) of the University of Canterbury granted approval for the research to go ahead on 27 February 2018, code HEC 2018/02. The HEC granted approval for two amendments. The first increased estimates of participation from 20 interviews to 50; and 15 survey respondents to 100. The second amendment was to offer a choice of either an interview or an online survey for art gallery audience participants. This change was prompted when I identified an art gallery in Christchurch showing an exhibition of a contemporary artist's Antarctic work within the

timeframe of the study. Conducting face-to-face interviews with exhibition visitors became a possibility. The amendments were granted on 27 August 2018 and 8 March 2019 respectively.

Informed consent: When potential participants were contacted they were given an information sheet about the research so that they could make a decision about taking part and give their informed consent if they decided to participate. Participants were required to sign a consent form before taking part. The information sheet made clear that participation in the survey was voluntary and that participants had the right to withdraw from the study at any time without penalty. The consent form included space for the participants to provide demographic information, including an option not to answer, and space for a contact email should they wish to receive a summary of the research findings or a link to the thesis at the conclusion of the research. A copy of the information sheet and consent form are included in Appendix 1.

Confidentiality: The information participants shared was stored securely. Paper copies of consent forms and printed transcripts were stored in a lockable cabinet in a secure building. Electronic data files were stored on a password protected computer on the university server only. No data was stored in a cloud system or on the researcher's personal computer. Participants were assured of confidentiality. An anonymised alphanumerical coding system was used to maintain confidentiality in file names, transcripts and the analysis. Tables 2 and 3 explain the coding system used to identify research method and participant professional grouping. With the exception of the title and location of the exhibition where I conducted the visitor response aspect of the study, no names of people and institutions who participated in the research are used in the thesis nor will be used in any publications resulting from the research. Data will be destroyed on or before 28 February 2031, 10 years after the completion of the study.

Table 2. Explanation of the participant code letter reference system

Research method		**Professional grouping identifier**	
I	Interview	A	Artist
		C	Cultural professional
		O	Organisation representative
		R	Researcher
EI	Exhibition Interview	P	Public
ES	Exhibition Survey		
S	Survey		

Table 3. Selected examples of the alpha-numeric participant codes

Codes	Research method	Grouping identifier #1	Grouping identifier #2
IOR1	Interview	Organisation representative	Researcher
IOA2	Interview	Organisation representative	Artist
IA3	Interview	Artist	
IOC4	Interview	Organisation representative	Cultural professional
IR10	Interview	Researcher	
IC17	Interview	Cultural professional	
EIP1	Exhibition Interview	Public	
ESP1	Exhibition Survey	Public	
SP1	Survey	Public	

2.5 Research methods

The design of this study is based on building a robust contextual understanding of the research topic and enabling a diverse range of participants to share in detail their views and ideas. The four research methods used, which are discussed in detail below, were: desk research; semi-structured interviews; an online survey; and a visit to an Antarctic art exhibition with participation in either an interview or online survey.

2.5.1 Desk research: literature review and artist research

The initial desk research was a substantial element of the contextual analysis for the study. In addition to reviewing the literature on Antarctic art, I collated a chronological list of artists who had worked in Antarctica since the first recorded expedition in 1772. Further, I sourced images of each artist's work to deepen my understanding of the range of Antarctic art that has been produced both in terms of the medium and the subject matter explored.

I have made every effort to trace the copyright holders and obtain their permission to reproduce the images included in this thesis. Each person contacted via email and asked to respond by a given date if they objected to an image being reproduced. No objections were received. In instances where no response was received but no objection lodged, I have acknowledged this in the figure explanations as, "Permission requested".

Literature review: Searching relevant databases, library collections, bibliographies, using Google Scholar and Google searching artists by name returned over 400 websites, journal articles, books, and book chapters that discussed some aspect of Antarctic art. Most of these returns were websites, books or articles representing a specific artist's work or an exhibition. Website and archive searches of NAPs returned policy, programme management and evaluation documents concerning arts programmes; news articles; and artists alumni details. The Antarctic Treaty Secretariat website provided information papers and final reports which refer to art programmes. The earliest journal article I found dates back to 1894 (Burn Murdoch & Bruce, 1894). Little was published before the 1980s (Coleman, 1978; Conly & Peat, 1977; Iredale, 1925; Mawson, 1919; Porter, 1978; Schulthess,

1960; Stokes, 1903). The vast majority of material has been published since 2000. The areas of interest explored in academic publications includes history of a certain period, voyage or artist; art and science research collaborations; narrations of art programmes; artists' practice-based research. There are some critical socio-political analyses of Antarctic art, as discussed in the introductory chapter, but, except for Elzinga's brief account recognising that several states have supported Antarctic art programmes (Elzinga, 2016), I found no analysis that provides a specifically internationally-framed discussion. The compilation of the literature review for this thesis may offer a useful foundation for the development of an Antarctic visual arts annotated bibliography. This will build on the work of the *Antarctic Circle* online resource (Fox, 2009) and it will complement Leane's *Representations of Antarctica* bibliography (Leane, 2001), thereby helping to fulfil Elzinga's call for an Antarctic art annotated bibliography (Elzinga, 2016).

Artist research: In order to build a picture of artists' presence, using publicly available information, I created a database detailing a chronological record of artists who had worked in Antarctica. Starting with the artists who crossed the Antarctic Circle with Captain Cook in 1773, the record extends through until the 2020/21 austral summer season. I collated information from publications that included chronological artist lists such as Wells (2012); Andrews (2007) and Fox (2009); NAP websites and publications about NAP programmes (Antarctica New Zealand, 2017; Australian Antarctic Division [AAD], 2017b; NSF, 2016); Antarctic artist residency webpages (Juan, 2018; SPRI, 2020a). Further sources included online gallery and archive collections; exhibition catalogues; artist websites and publications. In an attempt to broaden the data, I used Google Translate to convert search terms into Russian, Chinese, Japanese, Korean and Spanish to then convert the text of the returns back in to English; this resulted in a small number of useful returns, but limited overall success. The database includes the following details: the artists' names; their artform, which austral season they visited Antarctica; their nationality and gender; which programme or organisation enabled their visit; and from which state their programme originated. Where the information was readily available, I also noted the name of the vessel or research base and the location where an artist had worked. The database includes source references for each of the entries.

2.5.2 Semi-structured interviews: processes, questions and barriers

As perceptions of value are subjective a research method that allowed participants to share their views and interpretations was an appropriate approach in this study. I selected the semi-structured interview as a method because this approach has enough structure to focus on the central topic under study while also leaving space for participants to broaden the conversation, allowing the researcher the flexibility to follow up on ideas that participants introduce (Galletta & Cross, 2013).

Potential interview participants were identified through the literature review, my existing knowledge of Antarctic organisations and Antarctic artists, snowball sampling i.e. recommendations from other Antarctic researchers and study participants, web searches for appropriate institutions, and through contacts made whilst attending the SCAR/ISAC *POLAR2018* Open Science Conference. I chose to invite people who had worked in Antarctica or had knowledge of Antarctic art. The viewpoint of people who had first-hand experience or some knowledge of the Antarctic context was important. My own experience told me that the imagined and actual experience of working in Antarctica are very different. Although this decision introduced a bias into the data, I felt strongly that it was important to the study as it enabled ideas grounded in experience and knowledge to be shared, rather than lay perceptions based entirely on imagination and imagined realities.

Most interviews were arranged through an introductory email, which included an information sheet and consent form (see Appendix 1). 51 out of 67 of those invited to participate responded; representing a 76% response rate. The interviews took place between April 2018 and August 2019. Those interviewed were asked to contribute 60-90 minutes of their time: 10-15 minutes for previewing interview questions; up to 40-60 minutes for the interview; and 10-15 minutes for reviewing the transcript. Wherever possible I conducted interviews face-to-face. Where this was not practical, I arranged a video call. 28 interviews were face-to-face; 17 were via a video call; one was a phone call; and in five cases participants provided responses via email when we were not able to arrange or maintain a video call or phone connection. In advance of the interview, I provided an outline of interview questions and endeavoured to secure signed consent. On four occasions the consent form was completed after the interview; in these instances, the data was not included in the study until consent was secured.

Both the face-to-face and video call interviews worked well. The opportunity to meet in person and build an interpersonal connection through open body language, in most cases, facilitated the conversation. I could respond to visual cues and interpret participants' emotions and behaviours. These cues gave me important information about whether or not a participant was at ease, distracted, ready to bring the conversation to a close, or eager to continue. Furthermore, I was able to follow up on points participants made immediately for clarification or to seek expansion of their ideas. All the emailed responses lacked descriptive detail, and I had very little success securing responses to follow up questions. Usually within 6 weeks after an interview I sent the participant the typed interview transcript for their approval with a response deadline. Participants had the opportunity to amend or withdraw the transcript from the study before it was included in the data analysis.

Interview guide: Within the first year of the study I presented the project at the SCAR/IASC *POLAR2018* conference and invited critical comment from the humanities and social science scholars present. I was advised to pay more attention to bias and find a way to increase the robustness of the study through ensuring I examined the negative, as well as the positive, aspects of artists' presence within the interviews. As explained earlier, a bias in favour of artists' presence could be levelled at the study if I did not allow for critical examination of both positive and negative aspects of artists' presence. In response to the feedback, I added interview questions that explored people's criticisms. The structured questions I asked were:

- What is the role of artists working in Antarctica?
- What is the purpose of artists' Antarctic artwork?
- How would you describe the value to the wider world of artists working in Antarctica?
- What is the value of art?
- What are the most important factors that enable artists to work in Antarctica?
- How necessary is it that visual artists work in Antarctica?
- What criticisms do you have of artists working in Antarctica?
- Are there any reasons why artists should not work in Antarctica?
- What changes, in relation to artists working in Antarctica, would you like to see?

In addition, with artists I asked:

- What is the motivation behind your work?
- How necessary was it that you worked in Antarctica?
- What can you tell me about audience responses to your work?

With the exception of adding the two questions designed to explore negative perceptions I avoided changing interview questions, recognising the hazards of introducing a "moving target" that hinders achieving saturation (Bernard, Wutich, & Ryan, 2017; Guest, Bunce, & Johnson, 2006). I eventually stopped asking "what is the value of art", because the same answers were repeated, which suggested saturation. The answers were not adding anything new to the data.

Interview process: The interview comprised an opening section where I thanked the participant for agreeing to speak with me, I gave a brief introduction to the study, I reiterated the participant's rights, and I reconfirmed the guarantee of confidentiality and anonymity. If it had not already been completed, the consent form was then signed. With the participant's permission I recorded the conversation to enable an accurate transcription. I began with a broad open question in part to relax the participant and to gently enter into the focus of the conversation. I followed up with structured questions, the same ones that I asked of all participants, interspersed with questions to probe for more detail or clarity. I noted any meaningful narrative branches in the participant's responses which I then returned to later to explore further. Before drawing the interview to a close, I checked to make sure that I had asked all the structured questions and followed up on the narrative branches that I had noted. Finally, I gave the participants an opportunity to share final thoughts or ask questions about the study. I closed the interview by acknowledging their valued contribution and I emphasised that the typed transcript would be provided with an opportunity to make amendments. I reminded them that that a link to the thesis would be shared on completion of the degree. This process corresponds with the structure Galetta and Cross (2013) recommend.

Interview meeting places: For several of the face-to-face interviews, finding a quiet and private meeting place was difficult. Ambient environmental sounds and activities were distracting and disruptive. Background noises during recording affected voice and word clarity, which made transcription difficult. This experience highlighted the importance of finding a quiet space without interruptions. In many ways, video call interviews gave more opportunity for ensuring a quiet distraction-free location for the conversation. When I met participants in their place of work, on some occasions I felt that I had stepped into a place where the participant had authority, which affected how confident and relaxed I felt during the conversations. I noticed I was most comfortable with video calls because I was able to choose a space where I felt most at ease and I had time to prepare myself in that space.

Interview language barriers: The international scope was an important dimension of the study. With this came the challenge of trying to overcome language barriers. Fortunately for me the majority of participants for whom English was a second language were excellent English speakers, and the language difference did not impact on the quality of these interviews. For two interviews, one in Spanish and one in Chinese, I was fortunate to have the support of a translator. For two other interviews, where it was not possible to arrange translation support, it was difficult to achieve depth in our communication and understanding.

2.5.3 Antarctic art exhibition: collecting visitor responses

As several Antarctic organisations cite the ability of art and artists to engage audiences as one of the reasons for their artist programmes (Antarctica New Zealand, 2020; AAD, 2017a), gathering public responses to Antarctic artwork were an essential element of the study. In this audience-focussed aspect of the study I set out to gain some understanding of the thoughts, ideas, questions and emotions that contemporary Antarctic visual art can stir with the intention of relating these responses to the wider question of the value of artists working in Antarctica.

Selecting a method: Finding a meaningful way through which public responses to contemporary Antarctic visual art could be gathered steered the choice of research method. The three research methods I considered were participant observation, semi-structured interviews, and an online survey. After some consideration I rejected the idea of participant observation, whereby I would be present in the gallery to note visitor responses or approach visitors to ask for their responses, because of the practical and ethical issues involved. The norm of social behaviour in art galleries is predominantly one of quiet reverence; if conversations are held, they are often conducted quietly (O'Doherty, 1999). The chance of visitors voicing their opinions would be very small and most likely be inaudible. More importantly, listening in on people's conversations without their knowledge or consent is ethically questionable practice. The idea of overt participant observation, where I would approach visitors and, with their consent, ask them to share their views, was also problematic. Again, the issue of cultural norms of behaviour within art gallery spaces suggested that many visitors would be reluctant to engage in detailed conversation. A method was required whereby participants could give informed consent to view a suitable exhibition and share their responses in detail in a space where they felt comfortable to speak. The approach I considered to be the most ethically and practically sound had three key elements: voluntary self-selection; viewing an exhibition of contemporary Antarctic visual art; and participation in either an interview or online survey following the exhibition visit. In researching methodologies and methods for capturing audience views within an art gallery or museum setting, I found the "sense-making methodology" (SMM) developed by Dervin (Dervin, Foreman-Wernet, & Lauterbach, 2003) particularly relevant to the study.

SMM was developed to study communication and has been used in many kinds of audience studies including visitor engagement with art and cultural experiences (Dervin et al., 2003; Foreman-Wernet & Dervin, 2016, 2017). SMM has been used in art gallery and museum settings to understand audience responses and to help inform arts and museum audience development policies and practices (Foreman-Wernet & Dervin, 2017; Foreman-Wernet, Dervin, & Funk, 2014). The methodology has been adopted in studies aiming to understand exhibition viewers' interpretive activity. Considering my aim was to develop a deep understanding of visitors' responses to artworks, SMM offered a conceptual framework for the audience response element of the study.

Exhibition data collection process: I identified three potential exhibitions where the research could be conducted. One in Australia, one in the USA and another in Aotearoa New Zealand. The timeframe, exhibition content, travel costs and practical arrangements were key considerations and restrictions. *Phantasm: Discovering Antarctica,* an exhibition of contemporary photographer Anne Noble's work, was showing in Ōtautahi Christchurch, New Zealand and was an ideal exhibition for the study. Noble is an internationally acclaimed and accomplished contemporary artist who critically examines the construction of culture and ideas through the medium of photography. She has worked in Antarctica on three occasions and the show included a selection of work from each of her Antarctic residencies. As the exhibition was showing in my home city, this both eliminated travel costs and opened up the possibility of arranging face-to-face interviews with participants. The only restriction was time as there was only one week available to conduct the research before the end of the show. I secured consent to conduct the research from the gallery's management team and from the exhibiting artist. An invitation to participate in the research was circulated via the gallery's administration team through their mailing list. Participants self-selected. They could contact me via email to arrange a visit to the exhibition with a face-to-face interview. Alternatively, there was an option for people who had seen the exhibition to participate in the research through an online survey. The consent form and questions in the exhibition survey and interview were identical.

For the interviews, I met participants individually at the art gallery at separate agreed times. I thanked participants for their involvement and explained the process. They had up to 20 minutes to

view the exhibition and select one piece of artwork that had the most impact, however they chose to define impact, after which we met in a separate room for 20-30 minutes to talk about their responses to the exhibitions. I gave them a copy of the consent form and interview questions. The consent form was signed before starting the interview. The interview questions were based on the SMM approach (Dervin et al., 2003). They were designed to enable participants to articulate detailed thoughts and responses to the exhibition and artwork. The questions included:

- What were your first impressions?
- What questions did the exhibition trigger for you?
- What emotions did the exhibition stir in you?
- When viewing the exhibition, what memories or connections to other experiences came up for you?
- What thoughts or ideas did the artwork inspire?
- What did you learn or discover through the exhibition?

I followed the sense-making questioning with questions from the semi-structured interviews:

- What is the role of artists working in Antarctica?
- What is the purpose of artists' Antarctic artwork?
- How necessary is it that visual artists work in Antarctica?
- What criticisms do you have of artists working in Antarctica?
- Are there any reasons why artists should not work in Antarctica?

The interviews were audio recorded and transcribed. Each participant was invited to review their transcription with an option to withdraw it from the study before the data was included in the analysis.

Exhibition data collection limitations: The limited time available to conduct the research resulted in low participation figures. In total nine people took part: five through face-to-face interview; and four via the online survey. The demographic breakdown of participants is presented later in this chapter. This small response rate is an obvious limitation. However, even though the sample size was small, the data provided detailed insights into participants' thoughts, questions and responses to the artwork, which adds a valuable dimension to the study and the findings discussion. Another limitation is that data were gathered at only one exhibition of a single artist's work; with more time and opportunity an audience response study of a range of Antarctic artists' work at a number of exhibitions would be preferable.

2.5.4 Online survey: collecting public responses

Creating and distributing an online survey was an attempt to increase the opportunity for public and international participation in the research. Constructed and delivered using Qualtrics software, the survey was made openly accessible on the Internet from October 2018 to June 2019. Conforming to the human ethics requirements, anyone over 18 years and able to give consent on their own behalf could participate in the study. It was distributed via an email invitation through university, professional and community networks. The email invitation included a request to recipients to forward the survey to their own contacts and networks. I assumed that people would be reluctant to spend time taking part in a survey, and estimated a low response rate of 20 people. The figure was adjusted to 100 following a very positive response. The total number of respondents was 94. The survey was designed around the sense-making methodology questioning used in the art exhibition audience interviews and survey. Closed questions about respondents' level of Antarctic experience and levels of engagement with visual art were included, so that responses could be compared

between those who had visited Antarctica, with those who had little prior knowledge, and those already interested in visual art. A copy of survey questions in included in Appendix 2.

Survey limitations and bias*:* Three months into the online survey going live I examined the response record and found a distinct bias. The response from New Zealand was very high; and there was a significant response from the UK and the USA. I saw an opportunity to address this imbalance at the SCAR Humanities and Social Science conference in Argentina in April 2019, where I hoped to attract greater representation from South American residents. Although I did not have the resources to attend the conference in person, my senior supervisor agreed to present the study on my behalf and encourage delegates to participate in the survey. Further, my supervisor promoted the survey at the Universidad de Chile in Santiago, where she was giving a guest lecture. I had the survey professionally translated in Spanish to increase accessibility, and provided leaflets with a QR code link to the survey. Although people showed interest and took the leaflets, no responses to the survey were completed. As the attempt to address the bias in the data was unsuccessful, the survey data must be viewed as representing a narrow cultural spectrum.

2.6 Participants' demographics

To give an overall picture of participation demographics, this section opens with the presentation of the combined participation data from interviews, online survey and exhibition visit including a discussion of the limitations and bias the figures suggest. A summary of the participation demographics for each of the three research methods follows.

2.6.1 Overview of participation

There were 154 participants in total. Figures 1-5 show the combined totals of the participation figures for all research methods in relation to participants' continent of residence, age, gender, education, and Antarctic experience or knowledge. The interviews achieved the greatest cultural representation in terms of the participants' resident continent. There are far fewer participants under the age of 30 than any other age category, and their participation is almost entirely via the online survey. Although there were more female participants, there is no significant gender imbalance. There is a significant bias (62%) in the number of participants who have Antarctic experience or knowledge. The greatest bias is found in the educational attainment level of participants. There is a disproportionate representation of participants with a postgraduate qualification.

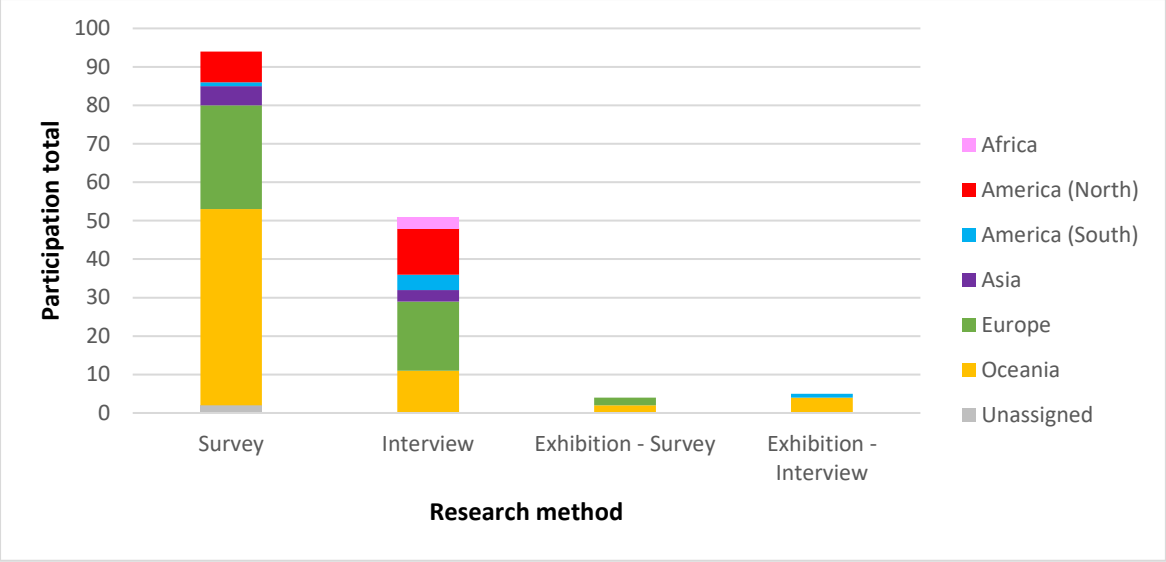
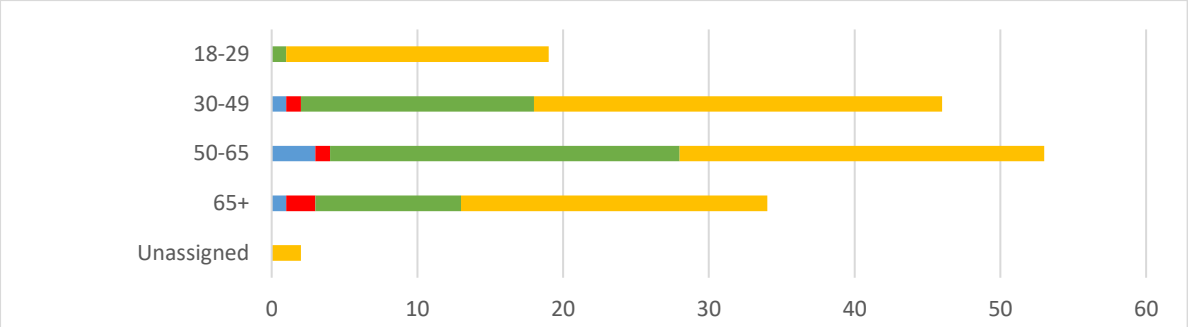
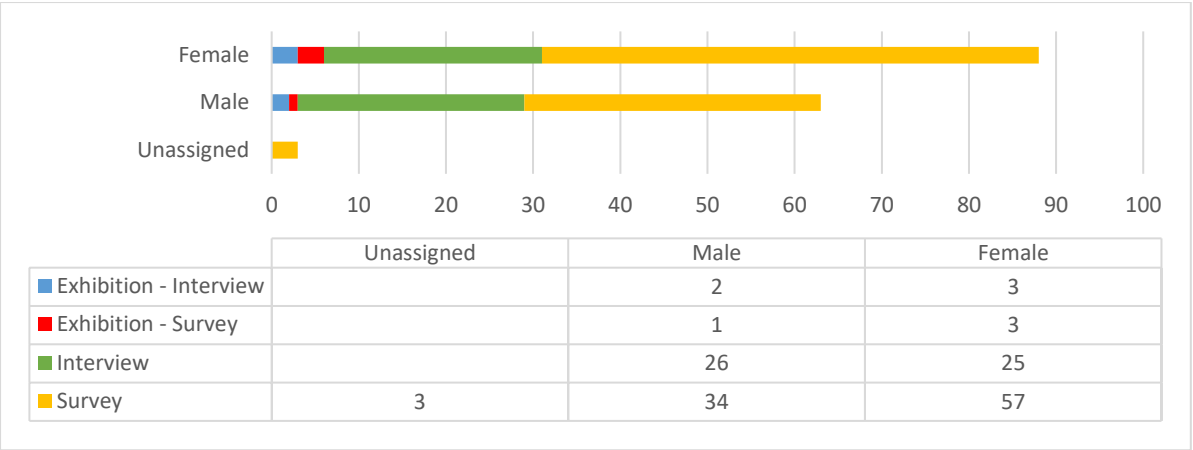


Figure 1. Participation totals: research method and continent of residence.



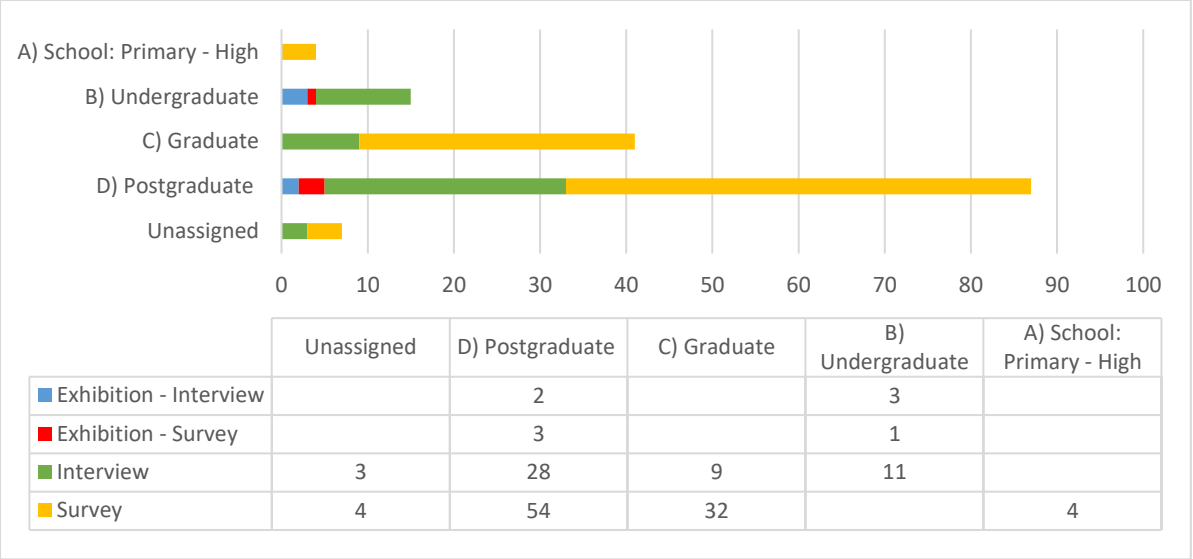
	Unassigned	65+	50-65	30-49	18-29
Exhibition - Interview		1	3	1	
Exhibition - Survey		2	1	1	
Interview		10	24	16	1
Survey	2	21	25	28	18

Figure 2. Participation totals: research method and age.



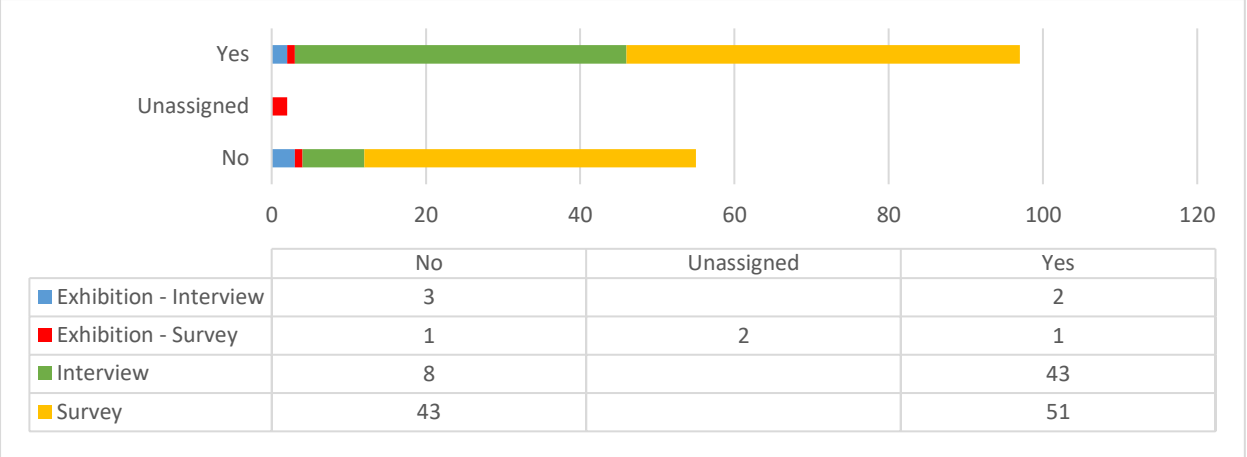
	Unassigned	Male	Female
Exhibition - Interview		2	3
Exhibition - Survey		1	3
Interview		26	25
Survey	3	34	57

Figure 3. Participation totals: research method and gender.



	Unassigned	D) Postgraduate	C) Graduate	B) Undergraduate	A) School: Primary - High
Exhibition - Interview		2		3	
Exhibition - Survey		3		1	
Interview	3	28	9	11	
Survey	4	54	32		4

Figure 4. Participation totals: research method and education.



	No	Unassigned	Yes
Exhibition - Interview	3		2
Exhibition - Survey	1	2	1
Interview	8		43
Survey	43		51

Figure 5. Participation totals: research method and identification of Antarctic experience.

2.6.2 Interview participants

As stated earlier 46 interviews were conducted, with an additional five participants providing responses via email when a meeting, or video call, was not possible. Only one participant was under the age of 30; 40 participants were between the ages 30-65; the remainder were over 65. The educational level of participants was extremely high, with over half educated to postgraduate-degree level. The figures on age and education are perhaps a reflection of the professional status of those interviewed. Males and females were equally well represented. All research participants worked, or had worked, in Antarctic contexts. Those who had not visited Antarctica had professional roles that had an Antarctic focus. Figure 6 shows that out of the four professional groupings, artists are represented the most. Although residents of all continents outside of Antarctica participated, there was significantly less participation from Africa, South America and Asia (see Figure 7). There was disproportionately strong representation from Europe, Oceania and North America. To some extent, this reflects the location of the states that support, or have supported, annual NAP art programmes.

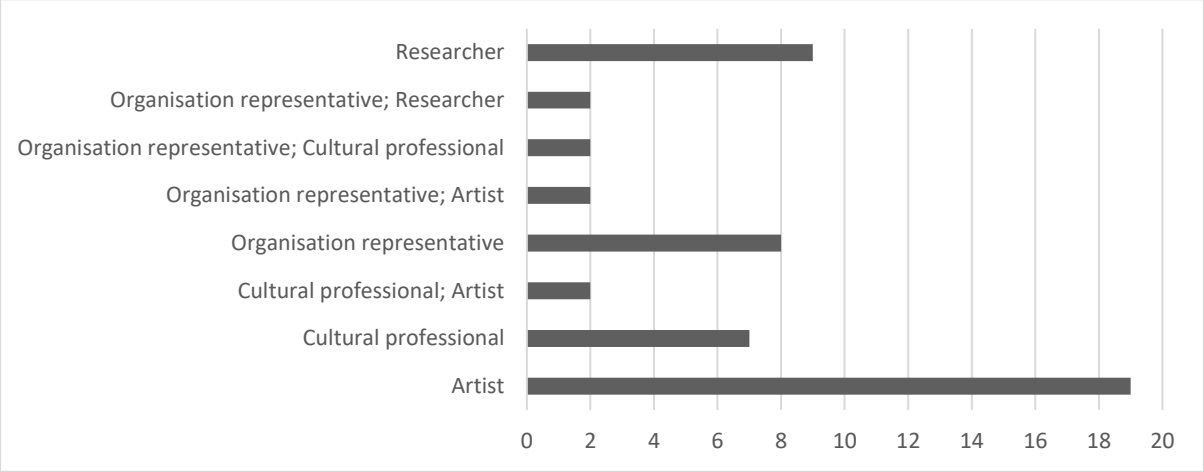


Figure 6. Interviews: professional grouping of participants.

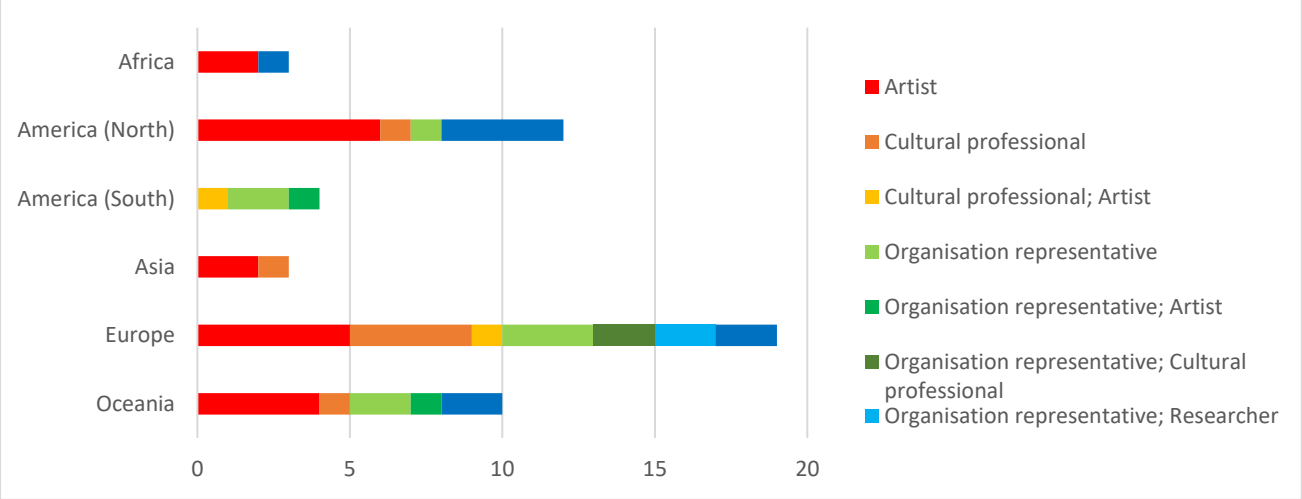


Figure 7. Interviews: participants' professional grouping and continent of residence.

2.6.3 Art exhibition interview and survey participants

In total nine people took part, three men and six women. All participants were over 30 years old, seven were over 50. One participant was from South America with Brazilian heritage. All other participants described their ethnicity as white European or New Zealand European/Pākehā. Participants were educated to undergraduate degree level and above. Three held a master's degree and two held doctoral degrees. Three participants had visited Antarctica as tourists.

2.6.4 Online survey

Out of the 94 respondents to the survey, 57 were female, 34 male, and three chose not to answer. Almost half of the respondents were below the age of 50. 18 of them were under the age of 30. The respondents were educated to a high level, with 57% (54 respondents) having a postgraduate qualification. 51 respondents (54%) reported having visited Antarctica either through a programme of work or study. An examination of the figures for ethnicity reveals a strong bias in representation. 51 of the 94 respondents were from Oceania, which accounted for 54% of the sample. A high representation of people from Aotearoa New Zealand who have worked or studied in Antarctica is perhaps a consequence of the invitation to participate being widely circulated amongst the New Zealand Antarctic research community networks. 94% of the respondents from Oceania identified as New Zealand European/Pākehā. Although there were eight nationalities represented in the 27 respondents from Europe, 22 of these respondents identified as white European, including 18 who identified as British. In total, of the 94 respondents, 80 (85%) described their ethnicity as White.

2.7 Data analysis processes

There were four phases to the analysis process. The first was the interviews themselves followed by the transcription of the interviews, then came the coding of the data, and finally the write up. Using active listening techniques during the interviews was the first opportunity to engage with and interpret the range of ideas and perspectives being shared. Replaying and transcribing the interview recordings verbatim was hugely time-consuming, but it made me more familiar with the content. I noticed important points that I had missed during the interview and I began to see connections with ideas other participants had expressed or material I had read. Proofreading of the transcripts was another opportunity to deepen familiarity with the data and prompt further critical thinking. The interview responses were rich with detail. By comparison, most survey responses were short, often single-word answers. This brevity made it difficult to interpret some of the ideas being communicated. This said, some concepts and words appeared repeatedly across the data, which indicated the emergence of key themes.

2.7.1 Coding to generate themes

To generate content for a conference presentation I ran an interim coding exercise. At the time I had completed five interviews. Similarly, after completing the exhibition visitor response element of the study I coded and analysed the interview and survey data to produce a summary findings report, which I shared with the artist and the host art gallery. These two exercises enabled me to develop, test and refine coding processes in preparation for working with the complete data set.

I used NVivo software to store, code and facilitate the analysis of the interview and survey data. Drawing on inductive coding methods (Auerbach & Silverstein, 2003), I selected text by going through the data of each transcript and survey response line by line and asking, "what is this sentence or this passage about" (Bernard et al., 2017). Using the research questions as a guide I selected relevant excerpts of text, or "exemplars" (Bernard et al., 2017, p. 112), and labelled each with a title, i.e. a code, summarising the concept. I grouped exemplars discussing the same idea under the same code. A code was assigned for each distinct idea. Where codes were distinct but related to the same overarching concept, I grouped these under a theme heading. Where themes were distinct but related, I created a meta-theme; several key themes were generated through this process (Auerbach & Silverstein, 2003; Corbin & Strauss, 2008). I also used a "lumping" and "splitting" approach (Saldaña, 2009, p. 19), assigning a generalising code for a passage with a few ideas in it and splitting each of the ideas into separate codes. The data also proffered themes through in vivo coding where some key words and phrases repeated across the data (Bernard et al., 2017; Saldaña, 2009). For the most commonly occurring concepts I calculated in what percentage of the sample group they appeared. Another frequency recording I made was respondents' sentiment towards artists' presence in Antarctica in terms of whether they felt positive, negative or neutral.

The initial coding exercise threw up some interesting angles to the conceptualisation and application of value and values. It became clear that attributing value was viewed from different angles in terms of the *value of* something and the *value to* something. I made provision for these distinctions in the coding, but this meant that a lot of data was assigned to more than one code. Similarly, where an exemplar contained several ideas I assigned this text to more than one code. On reflection this was unhelpful as the repetition had to be stripped out at a later stage, which was a lengthy process. It would have been more efficient to assign exemplars to one code and revise this designation after review if required. This said, it is important to recognise the interrelationships between many of the concepts, as interconnection is a significant dimension of the findings.

2.7.2 Achieving saturation

Researchers agree that when no new information can be achieved, when similar ideas are repeated, and when no new coding categories can be developed, no new themes are being generated, it can be stated that saturation has been reached (Fusch & Ness, 2015; Glaser & Strauss, 2017). Data saturation is not necessarily dependent on the number of interviews; it may be more helpful to think of data as *thick* or *rich*. Thick refers to the amount of data, while rich describes "many layered, intricate, detailed, nuanced" content (Fusch & Ness, 2015, p. 1409). Ideally, both would be achieved. I successfully collected rich data from the majority of participants, but, in some instances, the data was *thin*, particularly in written responses or when language barriers hindered the depth of the conversation. The data can also be described as thin where the sample size for a geographical area was small, as in the case of Asia and Africa. For these reasons, I cannot claim that data saturation was reached. A larger sample size and first language conversations could have provided richer data and a greater possibility to reach saturation. This said, a certain level of saturation was achieved. Ideas within the data did repeat and major themes did emerge.

2.7.3 Data analysis and chapter configuration

After completing the coding of all the data I reviewed the themes and their content. I stripped out repetition, refined the coding labels and organised the material in relation to the research concerns. Appendix 3 provides screen shots showing excerpts from the finalised coding hierarchy.

As a first attempt at writing up the analysis I organised the material into three data analysis chapters, with a view to writing a fourth chapter to discuss and distil the research findings. The data had revealed that people associated certain values with Antarctica and these framed their views and how they regarded Antarctic artists and their work. Therefore, the first of the three chapters examined these values, within with there were four groupings geopolitical, environmental, knowledge production, and social/interpersonal values. The second chapter analysed perceptions and criticisms of artists' presence, and the factors that enable or create barriers to their access to Antarctica. A third chapter focussed on the perceived value of artists and their work. Having organising the material under these three analysis frameworks I found the structure accentuated the recurrence of some of the ideas that appeared in more than one chapter. For example, environmental concern appeared in all three chapters. This made the material appear repetitive and, from a reader's perspective, it was jarring. I surmised that a fourth chapter that discussed findings would only exacerbate the repetition. A review of the material prompted the decision to rewrite the chapters to combine data analysis and discussion according to core themes. I took a systematic approach to deconstructing and reconstructing the chapters. To ensure that none of the analysis or coded ideas were lost in the process and to enable me to group ideas while maintaining a reference to the initial chapter theme, I used a colour labelling system to record every idea in each chapter. The use of repositionable adhesive notes made it easy to group and rearrange ideas from each chapter into a new themed framework. Figure 8 illustrates the reconfiguration: blue labels denote the Antarctic values chapter; the two yellow-coloured labels refer to the artists' presence and enabling chapter; orange stems from the chapter on the value of artists and their work; and pink highlights key themes and ideas for the discussion.

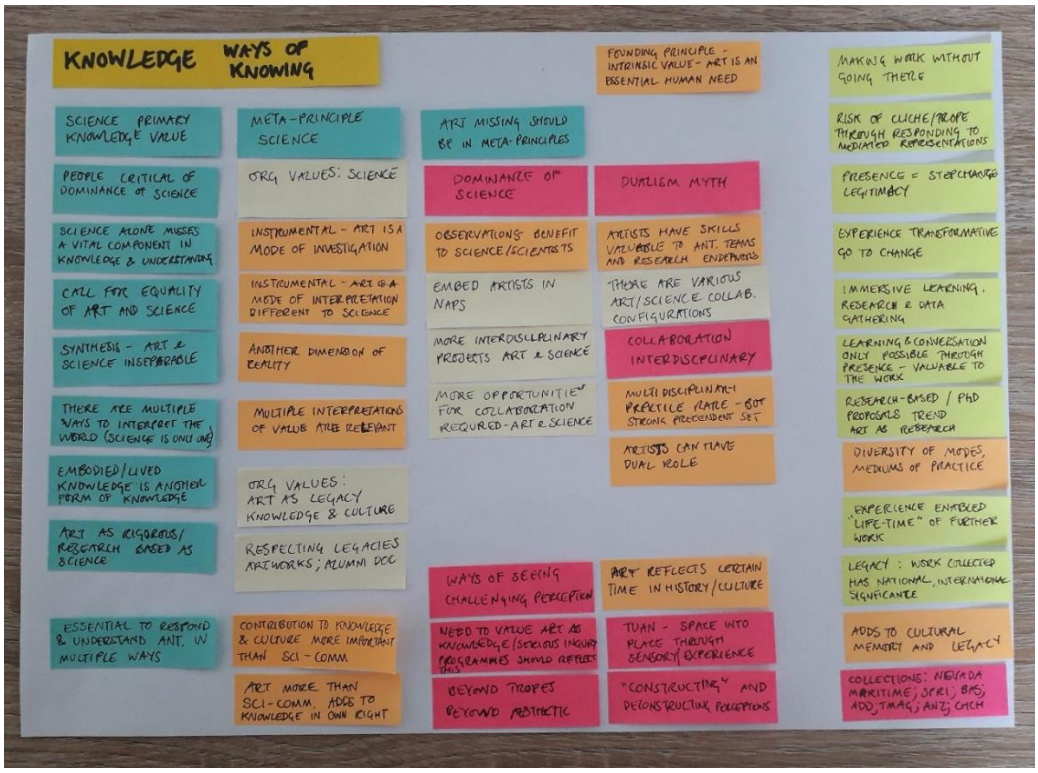


Figure 8. Method for reconfiguring three initial draft chapters into seven themed chapters.

As a result the reformatted thesis has seven chapters that combine analysis, discussion and, where relevant, reference to specific artists and artworks. At the end of each chapter, concluding observations summarise the main findings that relate to the research questions. The final chapter of the thesis draws together key points from the concluding observations and synthesises the learning and contribution to knowledge that the thesis offers. Although the reframing of the material resolved the issue of repetition to a significant extent, it is critical to recognise that there is substantial interconnection between the concepts, themes and findings of each chapter. Not only are many of the concepts relevant to several of the chapter themes, these interconnections are fundamental to understanding the value of artists and their work in an Antarctic context. There is a dynamic relationship in evidence: the values people associate with Antarctica influence their perceptions of artists and their work, simultaneously artists' work influences perceptions of Antarctica.

2.8 Concluding observations

This qualitative study sits largely within a constructivist paradigm where knowledge and interpretations of reality are recognised for being subjective and socially, politically and culturally influenced. A hermeneutic interpretive approach is taken to analysing the interview and survey data. Textual analysis through deconstruction, an approach associated with critical theory, is used to produce socio-cultural and socio-political readings of artworks relevant to the discussion. Acknowledging that my worldview unavoidably introduces a bias into my research conduct, I have endeavoured to adopt a reflexive approach in order to identify, as far as is possible, the influence of my bias.

This study is international in its scope. The compilation of the artist chronology reflects this, as does the international cohort of participants and the range of artists and artworks discussed. This said, a limitation of the study is the bias in cultural representation in the participant cohort. Although people from every continent outside of Antarctica participated, there was disproportionate representation from Europe, Oceania and North America.

The following chapters reflect the major themes to emerge out of the data analysis. Importantly, the chapters should not be viewed as mutually exclusive as there are significant interrelationships between the themes and ideas contained in each. Therefore, each chapter should be viewed as one aspect of a complex interconnected whole.

3 Charting artists in Antarctica

The aim of this chapter is to map the presence of visual artists in Antarctica, both historically and in the contemporary era. Based on a literature review and desk research, with an occasional reference to primary data from interviews that corroborate certain facts, this chapter provides a historical overview and charts the number of artists who have worked in Antarctica since the mid-twentieth century. This allows an understanding of the present in relation to what has changed over time. A close look at the numbers and demographics raises important questions addressed later in the thesis, namely, who are the makers of Antarctic art and whose culture do they represent?

3.1 Seeing and drawing Antarctica in the 18th and 19th centuries

Although the hypothesised existence of a southern continent was included in cartographic imagery as far back as circa 150 A.D. (Andrews, 2007; Fox, 2005b), actual sightings of Antarctica's iceberg "ice islands" (Hodges, 1773) were first committed to paper in 1773 during the second of Captain James Cook's far south and Pacific voyages (Joppien, 1985). William Hodges, the official artist of the voyage, was the creator of many of these first images. Hodges' instruction was to paint to "give a more perfect idea thereof than can be formed from written descriptions alone" (Amodeo, 2004, p. 70). Whilst I recognise, and discuss in Chapter 5, that there are other far south voyaging narratives that pre-date Cook's, in the context of this study 1773 is significant; it marks the start of artists working in Antarctica and producing art in direct response to being there.

Although Cook crossed the Antarctic Circle (66° 33' South latitude), he did not find land. It was 47 years later, in 1820, that glimpses of the coastline of the Antarctic mainland would be traced onto paper,[10] thereby spawning a proliferation of Antarctic-bound expeditions in search of seals, whales, scientific knowledge, and land in order to lay claims of sovereignty. During the 19th century expeditions from the US, the UK, Belgium, Norway, France, Russia and Scotland had accomplished artists and/or trained image-makers on board (Andrews, 2007; Bulkeley, 2013; Burn Murdoch & Bruce, 1894; Hooker, 2017; J. Pollock, 2013; Stokes, 1903; Truswell, 2011; Ward, 2001). Often the captain, or other members of the team, would be the primary image-maker in addition to, or instead of, an official artist (Andrews, 2007). Art and images had an important role to play in facilitating the imperial and colonial interests of the time. Each expedition had an agenda comprising a combination of political, scientific and economic interests (Boothe, 2011). The orders issued to Ship's Master Edward Bransfield in 1819 epitomise the concerns of the time:

> *You will explore every harbour you may discover, making charts and noting the soundings and whether secure for ships to ride in...You will ascertain the truth as to the abundance of sperm whale […and] the natural resources for supporting a colony...Your will note minutely the appearance of the land...You will collect specimens of each plant […making] drawings of each as well as of every animal, bird, fish, insect and reptile...You will keep a meteorological journal...ascertain correctly the latitudes and longitudes of the headlands...take possession of [the land] in the name on behalf of His Majesty. (Ida & Shirreff, 1913, p. 367)*

[10] British Naval Ship's Master Edward Bransfield sighted the mainland of the northern tip of the Antarctic Peninsula on 30th January 1820 (Campbell, 2000); Fabian Gottlieb von Bellingsausen, commander of the Russian southern polar expedition 1819-1820 sighted Antarctic mainland in February 1820 (Bulkeley, 2014).

Drawing and painting were the means of recording coastal profiles and topography. These recordings verified sightings, aided future navigation and supported territorial claims. Images of flora and fauna added to the cataloguing of species whilst also providing information about what could potentially be exploited for economic gain. A travelogue combining the ship's log, illustrations, and charts of previously unknown lands was a common tool for reporting back to officials and funders, as well as being a source of inspiration for readers, other artists, and writers (Hooker 2017; Pyne 1986). Images also served a public-facing purpose, able to give viewers a glimpse of the icy world and the perils that those who ventured there faced. Depicting towering ice and stormy seas, paintings of the era were often constructed in the tradition of the *sublime*, a style that accentuated human fragility when contrasted with the awesome power of nature, instilling in the viewer a sense of awe and even fear (Andrews, 2007).

3.2 The development of photography in Antarctica (1872 – 1954)

The *Challenger Expedition* of 1872-1876 was the first to include a camera in its expedition equipment (Andrews, 2007). In addition to the work of artist Jean Jacques Wild (also known as John James Wild), unattributed photographs of icebergs and landscape features populate the expedition report (Andrews, 2007; Codling, 1997b). Although photography grew in prominence in Antarctica, it did not replace drawing and painting entirely. By the beginning of the 20th century both photographers and artists were employed within Antarctic expeditions. Fox describes photography as "an additive technology" (Fox, 2012a, p. 23). The skills of painters were still required for subjects that could not be captured in black and white photographs, such as the scientific documentation of species and recording the atmospheric qualities of light and colour (Wilson & Wilson, 2011).

Those skilled at painting often had more than one role within a team. Dr. Edward A. Wilson held a scientific and medical position and was responsible for biological illustrations, landscape profiles, and depictions of the Antarctic environment and expedition events. Although he thought himself an amateur, he is widely acclaimed for his drawings and paintings (Wilson & Wilson, 2011). The scientific and narrative purpose of an artist's work is an important point to recognise; an artist was employed to support the scientific endeavours and to contribute images to expedition reports and public presentations.

Frank Hurley and Herbert Ponting are two of the most published and well-known Antarctic photographers and filmmakers of the early 20th century (Hurley & Rex, 2001; Ponting et al., 1979). Ponting accompanied Captain Falcon Scott's Terra Nova Expedition of 1910-1913; Hurley travelled with both Sir Douglas Mawson's 1911-13 Australasian Antarctic Expedition and Sir Ernest Shackleton's 1914-17 Imperial Trans-Antarctic Expedition. The imagery artists and photographers produced served a substantial reporting and public engagement purpose, frequently used as the basis for post-expedition fundraising lecture tours.

As image-making technology advanced during the 20th century not only did photography eventually become the primary medium for documenting and charting Antarctica, it also influenced the course of Western art history. Artists pushed the boundaries of art, which art historians describe as a series of *movements*, each challenging and progressing the ideas of the last. These movements were not reflected in Antarctic art at the time they were avant-garde. Stephen Pyne has discussed why the artistic tropes of modernism are absent in Antarctic art when they were at their height in the US and Europe, even though, in his view, Antarctic expanses epitomise modernist minimalism (Pyne, 1986). He suggests the philosophical questions that modernist artists were pursuing were at odds with the motivations of Antarctic expeditions of the time which he describes as "aggressive pragmatism"

(Pyne, 1986, p. 190). Science, rather than art and philosophy, was the driver of Antarctic activity. Topographical data collection of Antarctica's interior was the priority. Starting in the 1920s and continuing through into the 1950s, overland flights and technical aerial survey photography became increasingly prominent. From the inter-war period through to the post-WWII period there was little Antarctic activity, understandably, as states grappled with the impacts of war. The only official artist employed during this period was David Paige who overwintered with US Navy Rear Admiral Richard E. Byrd's 1933-35 expedition. As camera equipment became more affordable and accessible to non-professionals, members of expedition teams would be the ones taking photographs to document expedition activities. Partly due to WWII and its aftermath, and partly due to developments in photographic technology, there would be a twenty-year hiatus after Paige before an artists' eye would see Antarctica again.

3.3 Artists return to Antarctica: from 1955 until the turn of the century

From 1955 into the 1970s the artists who worked in Antarctica were either military artists, or invited guests of either the military or a scientific programme. The period leading up to the International Geophysical Year (IGY) in 1957-58 and the signing and ratification of the Antarctic Treaty (1959 and 1961 respectively) was a time of concerted military and scientific colonisation. During this period US military artists Robert Charles Haun, Standish Backus, and Arthur Beaumont accompanied Antarctic operations (Coleman, 1978). Mostly their work depicts sailors and ships navigating frozen or tumultuous seas and the activities of military occupation. Landscape painters Leland Curtis, Robert E. Hogue and Don Neilson were all invited guests of the US military (Dibbern, 2009). Similarly, the New Zealand Air Force hosted Peter McIntyre and Maurice Conly (Conly & Peat, 1977); and Edward Seago was an invited guest of HRH Prince Philip and the Royal Navy on board RY Britannica (Seago, Dowdeswell, & Lane, 2006).

There were several key developments during this period, the most significant of which was the arrival of the first female artist. Australian Nelle Isabel Law (known as Nel Law) travelled to Antarctica in 1960 with her husband Phillip Law, who was the director of the Antarctic Division and instrumental in the development of the Australian National Antarctic Research Expeditions (ANARE). Nel Law was an invited guest of the company that owned the expedition ship *Magga Dan* (J. Smith, 2012), and not smuggled on board as has been wrongly reported (Stevens, O'Connor, & Robinson, 2019). She was the first woman to create art in Antarctica. For the previous 212 years the imaging of Antarctica had been the preserve of men, predominantly white Western men.

Another development was a shift in artistic style. Up until this point romantic realism had dominated paintings of Antarctica. However, Sidney Nolan, who travelled with the US Air Force in 1963/64, created images that were far more expressionistic than anything that had been done before (James, Nolan, & Smith, 2006). His work is dark and brooding in mood, with ghoul-like portraits of explorers appearing in several paintings. David Smith travelled twice with BAS and on his second visit his work become much more abstract (Fogg & Smith, 1990). Tabular icebergs were depicted as geometric blocks of colour and light. In this period contemporary conceptual art is said to have arrived in Antarctica in 1959 (Fox, 2012a, p. 23). Swiss photojournalist Emil Schulthess, who accompanied the US Operation Deep Freeze, experimented with self-made lenses to create multiple and long exposures to capture the 24-hour sun (Schulthess, 1960). His creative experimentation offers "one of the most influential visions of the continent for other artists" (Fox, 2005b, p. 203) and paved the way for art as a mode of creative inquiry and experimentation. This period also saw the beginning of

modern tourism (Splettstoesser, Landau, & Headland, 2004)[11] and the creation of artist residency programmes, both of which have provided the greatest number of opportunities for artists to work in Antarctica. In 1966 Lars-Eric Lindblad established the blueprint for the current-day expedition-cruise model when he began taking paying passengers to the Antarctic.[12] By 1969 Linblad Expeditions owned a purpose-built ship and employed expert lecturers and guides, including artists, whose expertise enhanced the passengers' experience. British artist Keith Shackleton was one of Linblad's first artists in residence in 1969. The development of official NAP art programmes was a notable development of the latter 20th century. Resulting from a combination of the advocacy, commitment and vision of a key individual within the NSF, along with interest from high profile artists and political leaders (Guthridge, 2007), the US NSF was the first to formally establish an annual Antarctic art programme in 1982. The Australian Antarctic Division (AAD) followed suit, establishing a similar programme in 1984, as did Antarctica New Zealand (Antarctica New Zealand) in 1997. These three programmes ensured places for artists to work in Antarctica each year, whereas previously artists' presence had been sporadic.

3.4 Artists' access routes in the 21st century

Although there are very few opportunities for artists to work in Antarctica there is more than one access route open to them. NAPs, research institutions, research Principal Investigators (PIs), the military and the tourism industry have all enabled artists to pursue their work. Since 2000, out of the thirty NAPs that operate research facilities on the continent (Council of Managers of National Antarctic Programs [COMNAP], 2017), five, namely Argentina, Australia, New Zealand, the UK and the USA, have supported an annual arts programme.[13] The NSF and the AAD, and Antarctica New Zealand until recently, make a distinction between arts and media access with a separate media programme for photojournalists and filmmakers to visit. In the 2019/20 season three out of these five annual programmes were still in operation.[14] Typically, these programmes have selected between 1-5 people (artists, writers, performers or humanities scholars) each year. NAPs of other states have provided artists with opportunities on a more intermittent basis.[15] Occasionally projects are developed in conjunction with wider programmes of activity, such as the IPY 2007-08 (see the discussion in Chapter 9) or to mark a significant anniversary or event. Both the Chilean and Argentinian Navy have hosted artists on board their Antarctic vessels, mostly in partnership with their state's NAP art programme and occasionally through an arrangement separate to the official art programme (Hug, 2009; Ministerio de las Culturas, 2013).[16] Since 2009, the Scott Polar Research Institute (SPRI) has had an Antarctic artist in residence partnership with the British Royal Navy (SPRI, 2017). Working with scientists in a collaboration or as part of their team is another route artists have

[11] Occasional instances of tourist activity had taken place much earlier than 1955, Headland's chronology of Antarctic tourism (Headland, 1994) lists landings in the sub-Antarctic region as early as 1891, and the first tourist visit south of 60° southern latitude in 1933 (Headland, 1994).

[12] Linblad Travel was established in 1958. The company pioneered the first tourist expedition cruise to Antarctica in 1966 (Linblad Expeditions, 2020).

[13] Since its inception in 1997 Antarctica New Zealand's Antarctic arts programme has had several iterations. Currently it is not exclusively an arts programme, it has a broader community engagement focus. With an emphasis on audience reach, the programme is open to education and media professionals as well as artists.

[14] The Argentinian NAP art programme ran for twelve years from 2004/05 until 2015/16. The UK version ran for eight years from 2001/02 until 2008/09 (Walton, 2012).

[15] NAPs that have supported artists on an occasional basis include: Bulgaria, China, Ecuador, France, Germany, the Republic of Korea, South Africa, Sweden and Uruguay.

[16] For example, Fernando Prats travelled to Antarctica with the Chilean Navy in 2010/11 for his *Gran Sur* project, which was separate to the official NAP art programme (Ardenne, Castro, Pastor Mellado, & Prats, 2011).

taken. In these instances, the Principal Investigator creates the opportunity for the artist that they wish to work with. There are also examples of research institutions that have provided a place for an artist within their operations on an informal rather than a formal basis. An example of this is artist Zaria Forman who accompanied NASA's Operation IceBridge flights over Antarctica in the 2018/19 season (Forman, 2017b). Zaria had a seat on the aircraft to pursue her own work and data collection. Artists have undertaken other paid and voluntary roles as a way to reach Antarctica. Turner Prize nominated artist Darren Almond volunteered with the *Mission Antarctica* clean-up operation in 2002 (Hessler, 2011). Similarly, Veronika Podlasová volunteered with the Czech Republic's clean-up mission to the South Shetland Islands in 2019/20 (Podlasová, 2018). As mentioned in Chapter 1, on her return Podlasová presented an exhibition to complement ATCM XLII (Fix, 2020). South African physician and artist Roger Melvill accompanied the *Lewis Pugh Foundation* endurance swimming expedition as both the expedition doctor and resident artist (Melvill, 2016).

Antarctic tourism provides several avenues of access, each with varying roles and payment arrangements. Lindblad Expeditions continues to host invited artists periodically, enabling them to pursue their work whilst offering specialist lectures to passengers (IA25). In 2000 Quark Expeditions partnered with Australia-based Theme Media[17] to establish the *Polar Arts Program* that provided artists with opportunities to sail with Arctic and/or Antarctic cruises (TransArtists, n.d.). Notably it was the only openly advertised Antarctic residency opportunity within the tourism industry. Furthermore, artists from anywhere in the world could apply. Successful candidates received free accommodation and food on the ship, but they were not paid and they had to cover the cost of travel to and from the port of departure. Theme Media's partnership with Quark ended in 2007/08.[18] Over the course of the programme, 86 artists from 14 different nations participated in over 100 residency opportunities (Theme Publishing, 2007, p. 15). Chimu Adventures, an Australia-based Polar tour operator established in 2004, has also hosted artists in residence on their Antarctic voyages (Done, 2021; Hardcastle, 2017). Theme Media's *Polar Arts Program* provided many artists with their first Antarctic experience, several of whom continue to work in polar tourism through individual arrangements directly with tour operators. Artists will often take up paid roles as expedition staff, nature or photography guides, or work as an unpaid artist in residence (Coryell-Martin, 2019; Kokmeijer, 2016b; McEown, 2014) (2014; IA9; IA41; IA44; IA47).

Tourism is also an avenue for artists travelling as paying passengers. Richard Estes, Spencer Tunick and Paul D. Miller/DJ Spooky have each taken this route (Chase, 2014; Freeman, 2014; Houston, 2019; Kennedy, 2011; P. D. Miller, 2011; Rodríguez, 2007). Pierre Hugye, known for his Antarctic work *A Journey that wasn't*, is one of a small number of artists who have privately chartered a yacht to reach the continent (Franco, 2005). Others who have taken this route include Pierre Bernay (Bernay, 2017), and David Baker (Barker, 1991). Flying from South Africa via a chartered flight, Andrew Rogers (Rogers, 2016) and Nasser Azam (Pothier, 2017) made private travel arrangements to visit the Dronning Maud Land region. The organisers of the *Antarctic Biennale* of 2016/17 chartered an entire ship and its officers and crew for their project. Russian artist Alexander Ponomarev conceived and instigated the *Antarctic Biennale* with curator Nadim Saman. The concept

[17] The Theme Media *Polar Arts Program* was established by Ashley Frost, an Australian artist and son of Erica Wikander, one of the directors of Quark Expeditions from 1991-1998. Frost first worked on board a Quark vessel in 1992 in the role of a tender boat driver, and informally as an artist. He developed the *Polar Arts Program* (in partnership with Quark Expeditions), which ran from 2000 to until 2007/08 when Quark Expeditions was sold.

[18] After 2008 Theme Media changed their business model and worked with other Polar tour operators providing a photography and film documentary service. Strictly speaking this was not a residency opportunity where artists pursued their own work, they were contracted to produce a photographic/film souvenir product for the passengers.

was one of bringing together artists and thinkers from across the world and "developing Antarctica's potential as a cultural space belonging to no specific nation" (Antarctic Biennale, 2017a, p. 5). The ship was a platform for art making and interdisciplinary dialogue (Adams, 2017; Cocks, 2017). Although this floating Biennale followed the voyage itinerary of a typical tourist cruise, it was the first time an Antarctic ship-based venture of this scale had been devoted to a wholly artistic endeavour. It was a significant event in the international contemporary art calendar and in Antarctica's cultural history. An equally remarkable first, but on a much smaller scale, was Peter Hall's solo venture. Hall, a South African artist and naturalist who has worked for several years as a guide within Antarctic tourism, secured permission to camp on Deception Island in the South Shetlands in the 2004/05 season. Having travelled there on a tourist vessel, he camped on his own for 17 days (Hall, 2005a). Described as the "first solo expedition by an artist", Hall enjoyed having "free choice to do artistically, exactly what I wanted" (Hall, 2005b, p. 1). Connected to tourism but distinct from the examples described, is the third of New Zealand artist Anne Noble's three Antarctic voyages. During the same season that Hall camped on Deception Island, Noble undertook a critical arts inquiry on board an Antarctic-bound tourist vessel supported with research funding from Creative New Zealand. She specifically selected to accompany a voyage marketed as a photographic cruise. Rather than tourism being her access route to the continent, Noble's interest was in critically examining the relationships between tourism, photography and the construction of Antarctic imaginaries (Noble, 2011). Interestingly, during the last two decades, photography and plein air[19] painting remain two of the most common Antarctic artforms, continuing the cultural lineage that tracks back to the historic Antarctic expeditions. Based on the chronological data I collected and I describe in detail below, out of the 292 individual artists who have worked in Antarctica since 2000, 42% were painters and 26% were photographers.[20]

3.5 Charting the number of artists

As described in Chapter 2, to understand the extent of artists' presence in Antarctica I collated a chronology using publicly available information. The record includes each artist's name, their gender and nationality, when they visited Antarctica, how they got there (i.e. which expedition or programme), and the state origin of the expedition or programme. The chronological record starts in 1773 with William Hodges, who crossed the Antarctic Circle with Cook. However, for the purposes of the thesis, which is concerned with the contemporary era, the figures I present below focus on artists' presence since 1955. There are several reasons for this. Firstly, the historic data pre-1955 is potentially incomplete and misleading. Artists were often one of several trained image makers within an expedition crew. In many instances it is difficult to delineate between artists and those who created accomplished paintings and drawings but were not assigned as the expedition artist. While recognising that all types of image-making are important aspects of Antarctic cultural history and heritage, this thesis is concerned with those assigned art making as their primary role. Furthermore, not all historic expeditions are represented in my record because information detailing the roles of all those on board is not readily available - substantial archival research would be needed to collate this information. As this thesis is concerned with the contemporary context for artists' presence, an extensive examination to ascertain the details of every artist and image maker who participated in historic expeditions is not required and is outside of the scope of the study. The

[19] In Western art history, *en plein air* is the tradition of painting directly from nature in the outdoors.
[20] This count includes only photographers who identify as artists and worked in Antarctica with their own art making as their primary role and activity. It does not include photojournalists and documentary photographers and photographer working as nature guides.

important points to recognise are that image making has been central to human understandings of Antarctica throughout recorded history (Fox, 2005a, 2005b) and that cultural, political and technological factors have influenced how and why artists work in Antarctica.

The reasons for focussing on presence since 1955 are that this is the year that artists reappeared in Antarctica in the modern era following a twenty-year hiatus and, due to cultural and technological changes, there is a distinction between the role and work of artists and other forms of image making. Furthermore, the political and cultural foundations for present-day engagements and activity in Antarctica are rooted in the latter half of the 1950s. The international cooperative scientific endeavour achieved during the IGY is reflected in the principles of the Treaty. Further, the Treaty established the contemporary context of human presence in Antarctica and provided the basis for the present system of governance. Taking a view of artists' presence since 1955 allows an examination in relation to the development of the current cultural and political Antarctic context. Figure 9, p. 42 and Figure 10, p. 43 illustrate the numbers of artists visiting Antarctica between 1955 and the 2020/21 austral summer season according to a) the artists' nationality, and b) the state of origin of the project or programme of support. These figures only represent those artists who were in Antarctica with art making as their primary role. Those who worked in Antarctica in other paid or voluntary roles are not included. This is not to dismiss their work, which is an important facet of Antarctic culture. Rather, the focus is on understanding the extent to which artists work in Antarctica with art making as their primary activity. For this reason, the data include:

- Artists who have travelled to Antarctica through an official NAP art programme
- Artists-in-residence on board tourist or military vessels
- Artists sponsored, funded or invited to pursue their work in Antarctica

3.5.1 Limitations to the artist chronology

There are some limitations to the data. Language barriers restricted my ability to find artists through internet searches. Although I used Google Translate to facilitate my search and I found a number of artists through doing so, it is likely that there are artists who have not appeared in the searches and therefore are missing from the record. Also, it has not been possible to secure comprehensive data for the number of artists who worked in Antarctica via the Theme Media *Polar Arts Program*. Therefore, the actual number of artists from 2000 until 2008 may be slightly higher than I have calculated. Finally, a small number of artists have reported working in Antarctica for several seasons without stating which years. In these instances, I have attributed an entry for the number of seasons that each of these artists state they worked in Antarctica, but these entries may be assigned to the incorrect year. Further research is required to develop and corroborate the accuracy of the data.

3.5.2 Analysis of artist numbers

Figures 9 and 10 present the same data in terms of the annual number of artists, the distinction between the two is that Figure 9 shows the artists' nationality and Figure 10 shows the state origin of the project or programme that enabled the artists to travel to Antarctica. Figure 10, which builds on an earlier version of the chart (Jackson, 2019, p. 356), illustrates a number of significant developments. The introduction of annual NAP art programmes in the 1980s had a positive impact on artist numbers. Before these programmes were created, artists were invited to accompany expeditions on an informal and occasional basis. Staring in the 1980s, an annual artists' presence is established. The next developments of note appear in the first decade of the 21st century. During this period BAS and DNA established annual art programmes in 2001 and 2004 respectively.

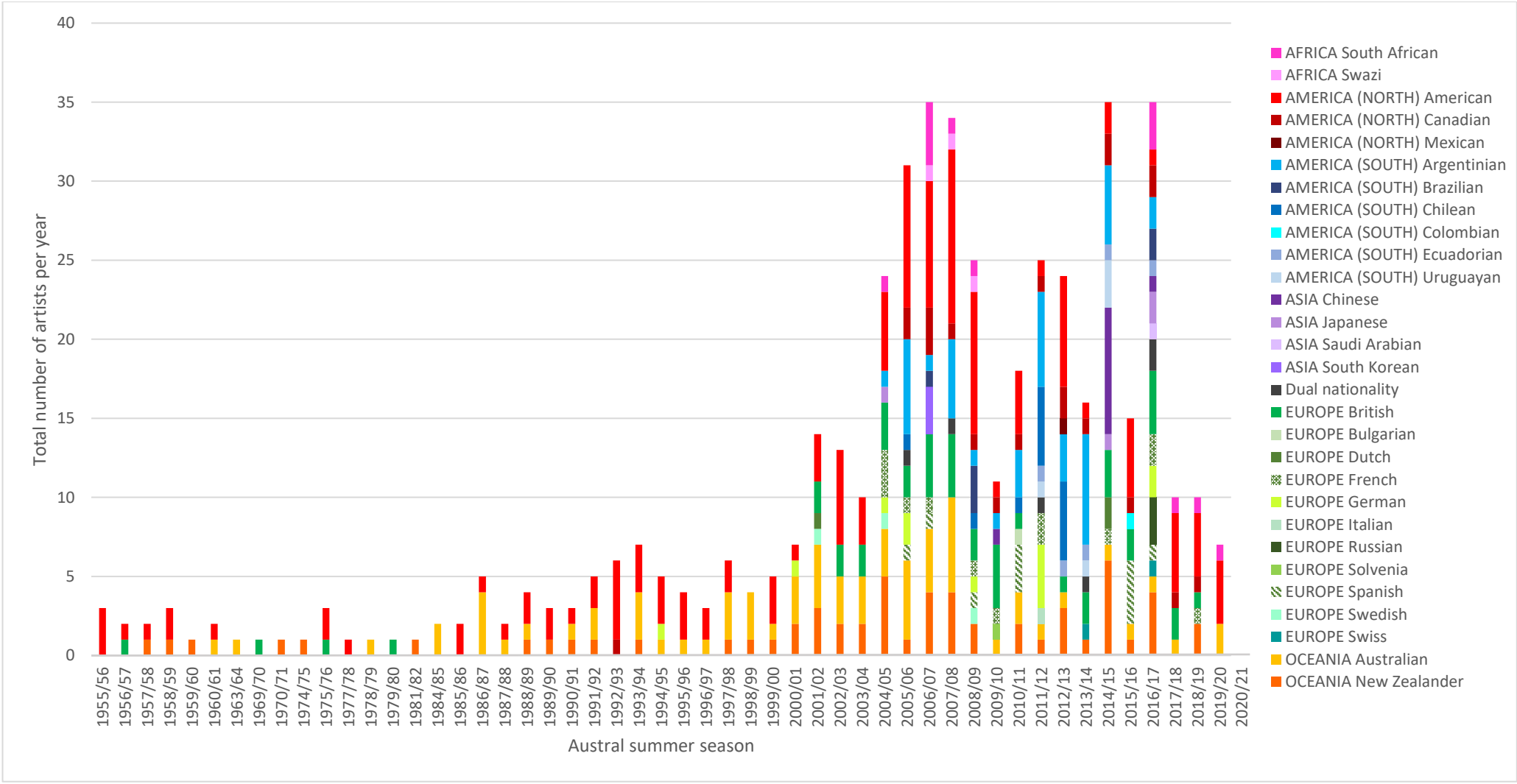


Figure 9. Annual number of artists and the artists' nationality.

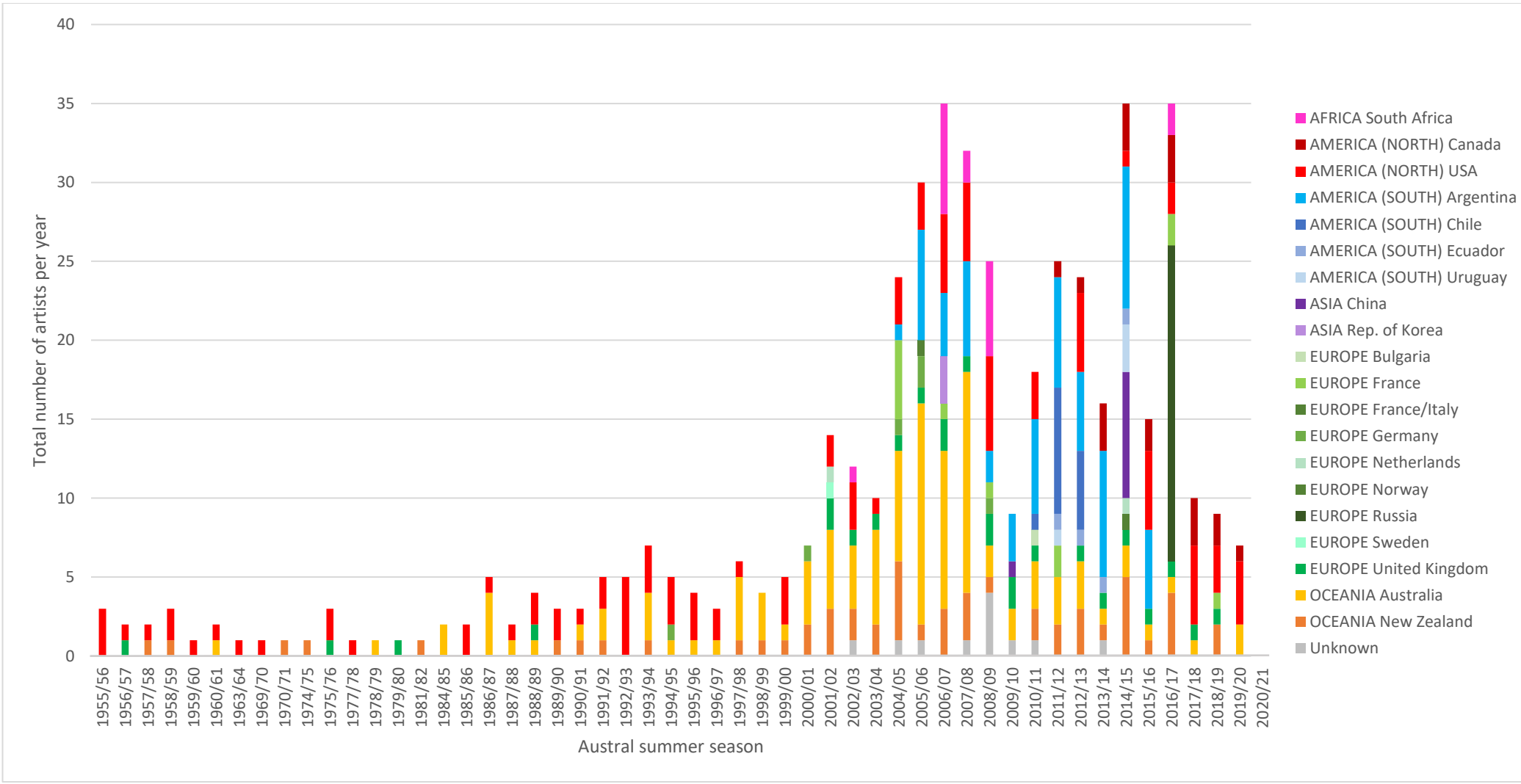


Figure 10. Annual number of artists and the state origin of the programme of support.

Additionally, a number of NAPs (China, France, Germany Republic of Korea and Sweden) supported artists' projects. A substantial international collaborative arts project for the IPY 2007-08 explains the appearance of South Africa in 2007. The *Polar Arts Program* artist residency partnership within Antarctic tourism also contributed to increases in this first decade.

Viewed together, Figure 9 and 10 illustrate substantial increases in the diversity both in the state of origin of support and the nationality of the artists between the years 2004 to 2017. Increases in the diversity of the nationality of artists reveal the positive impact that programmes open to international applicants can have. This is a significant point of comparison between the state-supported NAP art programmes. Up until the time of writing this thesis, the AAD art programme has been open only to residents from any of the original 12 Treaty signatory states, with preference given to Australian citizens. The NSF programme was open to international applicants until very recently when in 2019 the programme limited access to US citizens. Antarctica New Zealand's programme has only ever been open to New Zealanders. Similarly, only British citizens were eligible to apply to the BAS art programme. In contrast, Argentina's DNA programme *Arte en Antartida* was open to international applicants. Similarly, the *Antarctic Biennale* organisers selected an international delegation of artists. As a consequence, the DNA programme and the biennale achieved the most in terms of increasing the diversity of cultural representation (Antarctic Biennale, 2016; Juan, 2018). Through broadening the range of nationalities represented in the alumni, these two programmes substantially increased the diversity of cultural engagements with and responses to Antarctica.

Figures 9 and 10 also show declines in numbers. Three factors explain the decline of artist numbers seen in 2009/10 that Figures 9 and 10 both show. Firstly, the artists the NSF and the AAD selected to work in Antarctica that season were not visual artists; therefore, they do not appear in these figures. Secondly the *Polar Arts Program* came to an end in 2008. Thirdly, the economic crisis prompted organisational reviews. In the UK, BAS underwent an audit and the Arts Council cut the funding that had part-funded the BAS art programme. The combination of extensive cuts and restrictions around the use of core funding resulted in the programme ending. The period from 2010 to 2020 saw several events of note. Three more South American NAPs (Chile, Ecuador and Uruguay) began supporting artists and SPRI established an annual art programme, which maintained the presence of the UK in the record. In 2014/15 a cohort of ten Chinese artists received sponsorship to travel to Antarctica on board a tourist vessel (Hong, 2015b). The *Antarctic Biennale* in 2016/17 increased numbers substantially, which disguises the negative impact of the DNA art programme ending following a change in the organisation's leadership in 2015/16. Due to the termination of programmes and projects, the data of the last three years show a substantial decline not only in artist numbers but more importantly in their cultural diversity.

The impact of Covid-19 can be seen in 2020/21. In an effort to keep the continent free of the virus several NAPs reduced their operations. Antarctica New Zealand, AAD and the United States Antarctic Program (USAP) each pared back their 2020/2021 operations to support the continuation of some long-term data collection, instrumentation maintenance and essential station maintenance works. The NSF suspended their Antarctic art programme for review in 2020 (NSF, 2020), which raises the question of when and if it will be re-instated. A statement published in 2021 explained that the programme would continue to be suspended for the 2021/22 season (NSF 2021). The artists that AAD selected for the 2020/21 season had their journeys postponed until 2021/22 (AAD, 2020).

3.5.3 Concluding observations

Despite the introduction of NAP art programmes and the growth of tourism, which both resulted in increased annual opportunities for artists, particularly in the first fifteen years of the 21st century, the number of artists and art programmes has dramatically declined in the last four years. One reading of this is that artists and their contributions appear to be valued less now than they were a decade ago. Organisational reviews, changes in leadership and an inability to maintain an art programme beyond the short-term are all contributing factors in the decline. These observations provide the backdrop to the next chapter, which explores factors that enable access and those that create barriers.

The other significant finding from this chapter's analysis relates to the availability of international opportunities. In addition to the original twelve signatories a further 42 states have acceded to the Treaty (Secretariat of the Antarctic Treaty, 2020). 30 states operate one or more research facilities on the continent, yet only two of these have made a commitment to maintaining an annual programme with a specific arts focus. Considering that Antarctica is thought of as an international commons and a place of international cooperation, it is a pressing concern that the diminished cultural diversity in the Antarctic artists alumni fails to represent the diversity of the international Antarctic community. This adds weight to the need for a study which examines the value of Antarctic art. Cultural diversity and international cooperation is a topic I return to in Chapter 5.

4 How artists are enabled to work in Antarctica

Opportunities for artists to work in Antarctica are scarce. Drawing on interview data, desk research and literature discussing individual artists, this chapter examines key factors that enable artists to work there successfully and productively. A description of access to opportunities leads on to a discussion of the places artists work and working parameters that influence their practice. The discussion identifies some of the barriers that exist and draws attention to the necessity of organisational support and leadership in creating opportunities and providing artists a means of access. The critique does not assume that artists' presence in Antarctica is positive. Indeed, an analysis of interview responses shows people expect adherence to certain values and behaviours and they are critical of activity that breach these. In addition, concerns about the environmental cost of air and ship travel, and the high financial cost of Antarctic activity, make questioning the need and value of physically visiting Antarctica entirely appropriate.

4.1 Informal networks and formal applications

Although artists who have the funds can create their own opportunities and make private travel arrangements (Azam, 2020; Bernay, 2017; Franco, 2005; Rogers, 2020), most artists will reach Antarctica via a formal application or proposal process, or through the more informal route of developing professional networks and creating opportunities for invitations and collaborations. In both informal networking and formal application processes, besides the artists' work and their level of professional experience,[21] a key consideration is an artist's interpersonal skills and their ability to build rapport and good working relationships.[22] Working and living with a small team of people, often in confined and uncomfortable conditions, is a common feature of Antarctic life. As one scientist explained,

> *The people that I've taken to the Antarctic with me, I've known them ahead of time...I've had a sense of whether they would be able to fit in with [the] group dynamic. (IR39)*

NAPs that informally invited artists were criticised for a lack of transparency and rigour (IA33). In the opinion of a number of artists and cultural professionals an open and transparent selection process was extremely important (ICA14; IA28; IC29; IA33). Several more expressed a strong preference for NAPs to require artists to submit a detailed proposal that clearly demonstrated a need to be in Antarctica, and for the selection process to involve peer review by professionals with arts expertise.[23] One artist described programmes without peer review as "totally flawed" (IA33). Others observed that partnerships with the professional arts sector are an important dimension missing in NAP art programmes (IOR21; IO49). Such partnerships were deemed to provide a level of authority that enabled greater recognition of the cultural and intellectual contribution of an artist's work (IOR21; IA33; IO46; ICA48). A formal programme with a proposal-based peer-reviewed selection process with clear criteria was considered the ideal model for selecting applicants (IOR21; IA33; ICA48; IO49). In such a model, artists are required to approach the application as a research proposal (IA3; IC29; IA33). As one artist observed, "the proposal system is essential in any kind of knowledge production scenario" (IA33).

[21] IOC8; IA9; IC18; IA25; IC29; IR39; IA43.
[22] IOA2; IOC8; IOC11; IC18; IA19; IC20; IOR21; IA25; IR27; IA28; IOA32; IA38; IR39; IA44; IA45; IA47.
[23] IOC8; IC18; IOR21; IO30; IA33; IR42; ICA48; IO49.

For some artists, their NAP art programme proposal formed the basis of a PhD. Others have pursued a PhD following their Antarctic experience. The 21st century has seen a small number of artists in the UK, the US, Australia and New Zealand fuse their Antarctic interests with post-graduate research. For Kirsten Haydon, who travelled with the Antarctica New Zealand artists and writers' programme in 2004/05, and Donald Fortescue, who travelled with NSF in 2016/17, their practice-based PhD research was central in their applications which identified visiting and working in Antarctica as essential to their study (Fortescue, 2019; Haydon, 2008). Although Wayne Binitie did not visit Antarctica his PhD relied on a close collaboration with BAS (British Antarctic Survey [BAS], 2019b). Binitie worked with the leader of the ice dynamics and paleoclimate team to create artworks and an installation exploring themes of glacial past and futures. Australian artist Lisa Roberts pursued her arts practice-based PhD as an avenue to develop the ideas and interests generated through her time as recipient of the AAD artist and writers' fellowship (Roberts, 2010). Since graduating Roberts has continued to collaborate closely with Antarctic and marine scientists, and is an active member of the Antarctic humanities academic community. Artist and arts education specialist Gabby O'Connor spent two seasons working in Antarctica embedded within a science team researching the dynamics of super-cooled sea ice platelets. On her return she embarked on a practice-based PhD exploring the arts, science and education interface, based at New Zealand's National Institute of Water and Atmospheric Research (NIWA). O'Connor and her collaborators have published several papers recounting their process and project outcomes, and this is a topic I explore further in Chapter 9.

Arts-based Antarctic-focussed research projects are a noteworthy development in the academic framing of Antarctic visual arts. This may be a reflection of a wider cultural and professional trend, as one arts academic observed, around the world "many artists have become much more research-focussed" (IC35). There may be other more pragmatic reasons for the development. One artist interviewed determined that framing their Antarctic proposal as a component of a PhD would be viewed favourably by the selection panel. Others explained that after returning home their PhD enabled them to continue their creative exploration and their connection with Antarctic scientists. I would suggest that this could be an indication of a new pattern beginning to emerge. The emphasis on research, albeit scientific research, as the primary legitimate endeavour in Antarctica, may encourage artists to pursue the avenue of postgraduate research to secure opportunities to develop their practice in Antarctica.

4.2 Routes and locations

Some of the artists who have worked in the tourism industry for many years have visited a substantial number of sites around the continent. David McEown has worked in more places than most. McEown started working in the industry at a time when circumnavigation voyages were in operation. Figure 11 highlights all the places around the continent he has painted. More commonly, artists working on tourist vessels will visit locations along the west, north and eastern tip of the Antarctic Peninsula region. Destinations in the Ross Sea region and East Antarctica are less frequently visited.

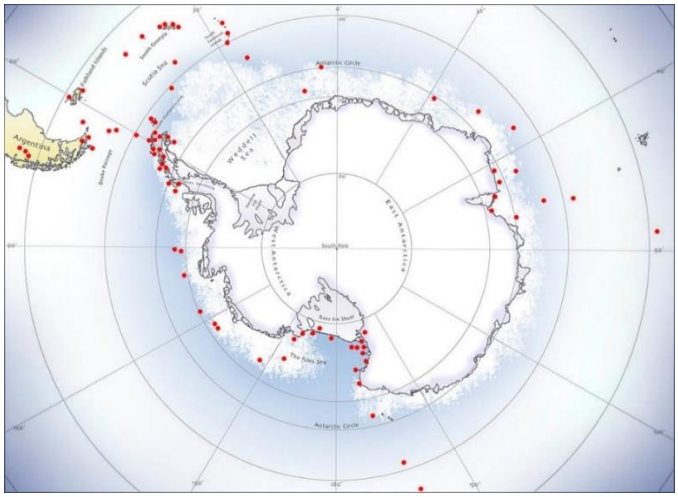


Figure 11. Painting locations of artist David McEown (2020). ©the artist. Reproduced with permission. Retrieved 21 May 2021, from https://www.davidmceown.com/project

As mentioned in the previous chapter, the Argentinian, Chilean and British Navy have supported artists. All three primarily operate in the Peninsula region as this is where each of the states assert a territorial claim, and it is where they each maintain research stations and heritage sites. Tourist and military vessels have itineraries open to change depending on ice and weather conditions, often with no guarantee of an opportunity for artists to go ashore. NAP research vessels have also hosted artists. These vessels may have an entirely ocean-based research itinerary, or they may also have staff transfer and cargo visits to research stations.

Flying is another possibility. Artists have flown to Antarctica to visit research stations and to accompany aerial survey flights. Those travelling to McMurdo station (USA) or Scott Base (NZ) will fly from Christchurch, New Zealand to Ross Island, in the Ross Sea region in East Antarctica.[24] From there, flights and overland transport provide access to other places such as Mount Erebus, the Dry Valleys, the South Pole, or the West Antarctic Ice Sheet. Other NAP research stations[25] are reached via aircraft or ship departing predominantly from one of the five Antarctic gateway cities.[26] Depending on the research focus and logistics capability of a station, travel beyond the main base to research locations is on foot, via aircraft, boat, or an overland vehicle. In order to arrange suitable transportation and correct permits, an artist travelling with a NAP will often be required to develop a field plan detailing where they want to go, what they want to do, and the logistical support required.

Artists' ideas may lead them to pursue creative inquiry on, above or even underneath the ice. At least three NSF recipients have pursued underwater arts-based research underneath sea ice (Schwengel-Regala, 2020; Simonson, 2017; Wu, 2019). Artists may seek to visit or work with a specific research team if they have a particular interest such as paleoclimate ice core drilling (McKee, 2010), or sea ice platelets (O'Connor & Stevens, 2018). Others may need to visit a specific geological, biological or historic site to carry out their work, such as Lake Vanda (Tuft, 2014), Sky Blu deep field resupply depot (Drury, 2008) or Cape Royds historic hut site (Garwood, 2017; Ussher, 2010). To

[24] USAP also operates Palmer station in the Peninsula region.
[25] For a full list of research stations see the *Antarctic Station Catalogue* produced by the Council of Managers of National Antarctic Programs (Council of Managers of National Antarctic Programs [COMNAP], 2017).
[26] The five Antarctic gateway cities are Cape Town, South Africa; Christchurch, New Zealand; Hobart, Australia; Punta Arenas, Chile; and Ushuaia, Argentina. Although it is not considered an international Antarctic gateway, Stanley in the Falkland Islands is a gateway port that the British Navy and BAS use.

access certain experiences or information some may seek to connect with logistics operations such as traverse or aerial events (Forman, 2017b; Noble, 2014).

In theory artists can work in Antarctica wherever vessels sail, aircraft fly and researchers are supported to collect data. However, opportunities for artists to work in Antarctica are rare. Some participants argued that there should be more opportunities created for artists to pursue work within science events and NAP programmes, and within tourism.[27] An artist who currently works within Antarctic tourism stated, "every ship should have an artist on board" (IA47). Furthermore, artists and researchers called for opportunities to be internationally open and for more international art collaborations between NAPs.[28]

4.3 Logistical support, environmental conditions and space

Participants acknowledged that no one can visit Antarctica easily or safely without tremendous logistical support and expertise.[29] Expressing great appreciation for the support they received, many artists commented on the significant investment involved in enabling them to work in Antarctica.[30] One of the major factors that artists reported had enabled them to develop their work was access to field locations (IA5; IA19; IA33; IA34). There are differences between NAPs in how they manage transportation arrangements. Some NAPs have more flexibility than others. In some cases, artists can negotiate transport needs and access to field sites during their visit (IA5; IOA32). Others, as stated earlier, require artists to provide detailed plans; several artists reported that extensive advance research and planning was required in developing their NAP art programme application.[31] In these circumstances there is little opportunity for adding a location or securing a seat in a helicopter while on the ice (IA33; IA34). One artist who researched her field plan in detail recounted enjoying having "full and unquestioned logistical support" that was a "precise match" with her project requirements (IA33). Others made the case for being granted "latitude to discover things [while] there" (IA34), explaining that a lack of flexibility could be restrictive (IA34; IR36; IA38). In some programmes, if an artist does not understand the operational systems and field plan requirements, it can leave them without allocated logistical support (IA33; IR37; IA43). For artists who have not worked in Antarctica before, it can be difficult to imagine and understand what possibilities there are and what might be feasible (IA34; IR37). Having observed this situation on several occasions, one scientist argued that,

> *If an artist suddenly gets a grand idea, there should be enough flexibility for them to pursue it. Right now, I don't think there is that flexibility...they have to plan things in advance. (IR36)*

In the case of tourism, in situations where a company's head office has agreed to host an artist and enable them to carry out a project, "it is the duty of the expedition leader to support this" (IA44). The issue of allocation of staff and tender boat logistics to support artists was noted as an occasional source of tension. Enabling guest artists, or artists who were paying passengers, to create their artwork could, at times, conflict with managing safety and landing operations with strict operational timetables (IA44).

[27] IR27; IC29; IO30; IR31; IR36; IR42; IA47.
[28] IR10; IR42; IA41; IA44; IO46; IA47; IO49; IA51.
[29] IOC4; IA19; IOR21; IO24; IC35; IA33.
[30] IA3; IA5; IA12; IA19; IA33; IA43.
[31] IA3; IA5; IA33; IA34; IA43

A lack of experience and assumptions about Antarctic weather conditions can be challenging in different ways. The severity and unpredictability of the weather can prevent some activities. More commonly, summer in the Peninsula region is not as cold as artists might anticipate. One programme manager remembered, "the sun spoilt all his installations...he needed to put it in the freezer...to finish his work!" (I032). Conversely, the weather can be unexpectedly fortuitous, providing a much-needed fresh layer of snow to enable artworks to be realised to their full effect. Chris Drury's *Wind Vortices* (Figure 12) is one such example. The artwork was created at Sky Blu, an aircraft resupply depot in Eastern Ellsworth Land, in the south-east Peninsula region. The strong winds scour the blue ice surface creating an ideal runway. Drury had to wait patiently for "a set of unlikely conditions" to align (Drury, 2008, p. 23). He needed a fresh layer of snow, no wind, a blue sky and a day free of aircraft operations to create a large-scale drawing of a wind vortex pattern in the snow using a GPS and a skidoo. Drury's ephemeral installation, comprised only of the materiality of the landscape itself, erased without trace as soon as the wind blew. The photograph remains the only evidence of its existence.

Figure 12. Chris Drury. *Wind Vortices*, Sky Blu, Antarctica, 2007. ©the artist. Reproduced with permission.

Another aspect of support is the provision of designated space to work, a challenge which may also be familiar to some scientists. Artists reported varying experiences, from having a small office on base (used to recharge equipment), to having a designated workspace on base or out in the field. *Studio Antarctica* was Gabby O'Connor's container-based artist's studio out in the field in 2015/16. Similarly, Stephen Eastaugh secured a designated studio space at Mawson station when he overwintered in the 2008/09 season (Eastaugh, 2009). However, the provision of designated space suitable for art making is an exception, not the norm. Commenting on station facilities, one scientist observed that "There are spaces for every aspect of life including fantastic space for scientists like me, but when the artists show up there, they're cramped into spaces that don't fit them" (IR36).

While artists require space for pursuing their cultural inquiry, they have also been responsible for creating cultural spaces. This was the idea behind German artist Lutz Fritsch's *Library in the Ice (Alfred Wegener Institute [AWI], 2005b)*. Conceived in 1995 and installed ten years later in 2005 to mark the 25th anniversary of the Alfred-Wegener-Institute (AWI, 2005a, p. 258), the library remains in Antarctica as a permanent feature of the Neumayer Station complex and a cultural sanctuary for base personnel. The ability of NAPs to designate, create and provide space for the creation and/or engagement with art and culture is a factor that benefits artists and base communities.

4.4 Time factors

The major difference between the various access opportunities is time. The length of time an artist spends en route, or in a given location, is one of the most influential factors affecting the development and realisation of their work. Artists have to design their work programme and activity according to the time they have. Tourist cruises typically spend the shortest amount of time in Antarctica. An average eleven-day cruise will spend four to five days at sea and six to seven days in Antarctica. Some military vessel itineraries can last several weeks to over a month in the Antarctic. In contrast, some NAPs and research programmes have supported artists over several months. Having overwintered, Stephen Eastaugh is an artist who has spent one of the longest periods of time there.

Ships are almost constantly on the move, whereas working at a research station or field camp allows an in-depth experience of one place. Importantly, spending time in one location enables an artist to witness changing conditions and to conduct their work according to these conditions, such as Drury's *Wind Vortices*. This said, not all NAP supported opportunities provide an in-depth experience. Two participants likened some NAP opportunities to whistle-stop sightseeing tours in which an artist was chaperoned to visit popular locations (IA33; IA34):

> *[The programme] was more of a sample of everything rather than an in-depth experience...you could [not] operate there as an artist, you were just given this experience and then expected to be an artist afterwards. (IA34)*

NAP programmes that parachuted artists in on short prescribed tours were deemed to be rather shallow experiences that hindered any depth of engagement and depth of research.[32] Moreover, one artist commented that a prescribed tour would be "unlikely to align with what an artist is there to investigate" (IA33). A scientist critical of short visits suggested that,

> *[For] some artists it might be no more than a tick in the box, "I've been to Antarctica". I think Antarctica deserves better than that...It deserves deeper engagement, a long-term engagement. (IR15)*

Programmes that allowed a longer stay in Antarctica were considered to provide better insights into "the nuts and bolts of Antarctic research operations" (IO30). Scientists and researchers who had worked in Antarctica advocated the need for artists to have more time.[33] Some suggested at least a month was required (IOR1; IR36; IA38), in order to be "immersed" and get "more than just superficial knowledge" (IA38). Several artists reported that working alongside a specific team or research programme, or spending time at a particular location, had provided a much more in-depth experience.[34] Others were disparaging about tourism in terms of the fleeting time spent in Antarctica and at any one location compared to some NAP programmes that allow longer stays[35]. A former programme manager commented that,

> *Being an Antarctic artist means spending time there, on location, observing, as a scientist does, not just flying over or steaming past in a ship. (IO49)*

In this respect, the *Antarctic Biennale* is an interesting example to look at. The Biennale followed the structure of a standard tourist cruise. The ship voyage was an eleven-day round trip to the northwest of the Peninsula region, with four to five days at sea and six days in Antarctica. Each day

[32] IOR21; IA28; IA33; IA34; IR42; ICA48.
[33] IOR1; ICA14; IR15; IOR21; IR36; IR37; IR42.
[34] IA19; IA28; IA33; IA34; IA38.
[35] IOR1; IA5; IA16; IOR21; ICA48; IO49.

the ship was in Antarctica they visited a different site. Artists went ashore for approximately three hours in the morning and again in the afternoon. They presented their work on shore, on board the ship, and underwater.[36] Some of the artists responded directly and spontaneously to the polar environment, for example Lou Sheppard drew coastline profiles and transformed these into the musical composition *Requiem for the Antarctic* (Sheppard, 2017). However, most artists travelled with preconceived ideas and installed pre-made objects in the Antarctic space. Antarctica became both a spectacular white cube[37] and a symbolic context for the artworks. The symbolic Antarctic polar location was central in *Stellar Axis,* the artwork of NSF recipient Lita Albuquerque. *Stellar Axis* required pre-fabrication, but in contrast to the work presented in the *Antarctic Biennale*, Albuquerque's work could not be realised within a three-hour timeframe ashore. *Stellar Axis* was a large-scale land art installation of blue spheres mirroring star constellations (Figure 13). Not only did the components of the artwork have to be made in advance, but it also demanded significant logistical planning and support for the project to succeed. Installation of the 99 spheres took almost a week (Fox, 2014). One of the artists interviewed for this study was critical of preconceived ideas and artworks being transported to Antarctica to be temporarily installed. In his view, "the point of going there is actually for it to change you or change your perceptions" (IA5). However, an artist's approach to working in Antarctica will depend on the concepts they are exploring, what their working practices are and the time and resources that they have available.

Figure 13. Lita Albuquerque. *Stellar Axis*, Antarctica, 2006. Photography by Jean de Pomereu. Nevada Museum of Art collection. ©the artist and the photographer. Reproduced with permission.

Several participants shared the opinion that artists' work benefits from repeat visits.[38] Comparing the experience of her first and second visits, one artist described the first as full of energy, excitement and seeing things with "fresh eyes", in comparison, "solidifying knowledge" and expanding her research defined her second visit (IA28). Another artist said,

[36] Underwater installations were deployed and photographed from a tender boat.
[37] *White cube* is a reference to the aesthetic convention of a contemporary art gallery space.
[38] IR10; ICA14; IC17; IOR21; IA28; IA34; IA44; ICA48.

> *I look at [my] paintings of fifteen years ago, and they're just so pathetic compared to what I do now. It takes a long time to understand a place. (IA44)*

One researcher argued that "artists should go as regularly as scientists, on most expeditions there should be a place for an artist" (IR42). It was suggested that Antarctica could be an artists' studio in the same way that it is a laboratory for scientists (IA34). The benefit of repeat visits would be "greater continuity" for artists' work to "evolve and move forward" (ICA14).

4.5 Finance and funding

How long an artist can afford to spend away from home due to their personal financial situation is a significant consideration.[39] The financial arrangement of programmes in relation to artists' personal circumstances was frequently raised as an issue,[40] largely because most Antarctic artist residency opportunities are unpaid. Commonly organisations provide transport, food, accommodation and field training but no money to cover an artist's time, equipment or materials.[41] Although there was appreciation that logistical costs are huge, some of those involved in programme management were conscious that not paying artists for their time presented issues (IOC11; IOR21). As one programme manager expressed "[artists] didn't have anything to live on or pay their bills while they were away" (IOR21). The financial issue concerned another manager who explained that in her organisation,

> *I don't think anyone sees the issues that I see...artists who can't afford to stop paying their mortgage for two months can't apply to our scheme...we're putting up barriers...paying [artists] for their time is sort of the bare minimum. You wouldn't expect any other kind of professional to work for free. (IOC11)*

Some artists can afford to take up an opportunity because they are able to maintain income streams at home whilst working in Antarctica. One described taking a paid sabbatical which coincided with the timing of his Antarctic residency (IA12). Others had jobs from which they could take extended leave (IA34; IA34). Some reported that the income from sales of their artwork balanced out the unpaid time in Antarctica (IA5; IA25; IA44). However, financial concerns should not be underestimated. Several participants stated that a lack of funding can severely limit the potential of a project, particularly the dissemination of the work and ideas.

4.6 Leadership and organisational commitment

Artists cannot work in Antarctica without the support of others. They require people and organisations to create access opportunities that enable meaningful creative inquiry. Such opportunities are dependent on leadership and vision (Elzinga, 2016; Guthridge, 2007).[42] An artist observed that one of the art programmes that she travelled with, "was set up by someone who really did see the importance of a cultural investigation alongside science" (IA33). Support from senior management within Antarctic organisations is vital, as managers are often the "gatekeepers and the resource allocators" (IOR1; IOA32; IO46).

[39] IA12; IA12; IA19; IO26; IR36; IA41; IA43; IA45.
[40] IOR1; IOA2; IOC11; IA16; IOR21; IO23; IO26; IR27; IA28; IC29; IOA32; IA33; IA34; IR36; IA41; IR42; ICA48.
[41] IOA2; IOR21; IO23; IO24; IA25; IA44; IA45; ICA48.
[42] IOR1; IOA2; IOR21; IOA32; IO46; IA47; ICA48; IO49.

Making the case for art and securing senior management support can be “a test of wills...who gets to decide what’s going to happen” (IO49). Some persuasion is required in “convincing people that this is a worthwhile exercise” (IOR1: IR37). While there was recognition that people in positions of power in scientific institutions may not have an in-depth experience or understanding of arts and culture, establishing opportunities for artists just requires the “willingness” of people running an organisation to “push the envelope” (IR27; ICA48; IO49):

> *We send hundreds of people to Antarctica, we can send more artists. It just takes imagination and an appreciation of the role of art in our society. (IR31)*

There was optimism amongst some who saw great potential with new leadership rising through the ranks (IR27; IA28), with one manager suggesting that “the opportunities are great” because “the new director has a mandate to create an artist-in-residence programme” (IO46). The incentive to develop a project or programme can come from within or outside an organisation. Several participants, artists, and Antarctic organisation representatives gave examples of artists approaching organisations with ideas and proposals that were subsequently developed into artist residency programmes.[43] Scientists have also been the instigators of collaborations with artists (IR27; IR39), some of whom strongly advocate for institutions and research funding streams to provide greater support for arts and science collaborations (IR27). However, whilst some scientists found there may be “some receptiveness” within an institution, formalising new approaches is difficult as, “art gets deprioritised” (IA28). Once in place, a programme requires the ongoing commitment of an organisation’s leaders and its personnel to continue to articulate the value of the programme (IOR21; IO24; IO30; IOA32).

Changes in personnel, political changes and organisational reviews can each have destabilising effects. A change in management can result in the neglect or withdrawal of art programmes (IOA2; IOR21; IOA32). As one participant explained, the new director decided that “art was not important” (IOA32). In some cases, “the institute doesn't have the interest [to] sustain [the programme]” (IR27). Such actions were attributed to those in power not fully appreciating the value of art to the organisation, or the value of art to knowledge and understanding of Antarctica (IOR21). Some organisations and their art programmes are vulnerable at times of elections (IO46; ICA48), “when governments change, everything changes” (IOA32). Review or restructuring of government agencies can “cause the death of perfectly good programmes” (IOR21). Individually, governmental representatives may also have the power to instigate change, which can either support or thwart the development or continuation of Antarctic art programmes (IO30; ICA48; IO49). Support at the governmental level was considered vital.[44] This said, some suggested a tactic of staying under the radar and quietly avoiding political interference can be an attractive option: “you just have to hope that the individuals [in the organisation] aren't under the influence of the current administration and that you can sneak under the gates” (IA41). A particular vulnerability is found in instances where art programmes are not strategically built into an organisation’s structure:

> *This organisation is funded and established to do science and so everything that is not science is questioned...it's not protected by the establishment objectives of the organisation and therefore you have to keep arguing the case to keep it funded. (IOR21)*

Some organisation representatives noted how they had encountered questions from colleagues and the public from time to time, about the use of resources and why a science-focussed organisation

[43] IOA2; IOA32; IO46; IA47; ICA48.
[44] IO26; IO30; IOA32; IO46; IC43; IO49.

would support artists (IOR21; IO23; IO24; IO30). Whilst several participants recognised that the opportunity to work in Antarctica had great value to the artist,[45] one questioned the benefit to the supporting organisation (IO23). To address any queries or criticism, some managers spoke of how important their organisation's policy and directives were in providing the explanations and justifications for supporting artists (IO24; IO30; IO49). They also stated that they welcomed questions about their art programme, as they saw this as "an opportunity to educate people" who did not understand why an artist was there (IO30).

To secure a solid commitment and establish stability, art needs to be "lifted up through the hierarchy" to make it a "fundamental part of the portfolio...and research funding streams" (IR27). The programmes with the greatest stability and longevity are those embedded within an organisation and its policies and operational structures and less reliant on an individual's enthusiasm.[46] In some programmes this is achieved through alignment with the organisation's vision (IO30), connecting to "core business" and strategy (IO24; IO30), or through seeking to achieve "business outputs" (IO24). Organisations such as the AAD and Antarctica New Zealand each have public engagement policies, and align art with achieving their education and outreach objectives (Antarctica New Zealand, 2020; AAD, 2017a), a topic that I return to in Chapter 9.

Changes in an organisation's circumstances can easily derail an Antarctic art programme. A recent example is the Covid-19 pandemic which prompted some NAPs to reduce the scale of their 2020/21 programme to limit the possibility for the virus to reach the continent. Art programmes were one of the first activities to be suspended. Changes in financial circumstances through the loss of a sponsor or other source of external funding, an internal audit and spending review or budget cut, or the sale of the company has resulted in several programmes coming to an end.[47] Art is "dropped off the list" as budgets tighten (IR42). A decision to suspend or cut an art programme reveals something about organisational attitudes, values or priorities. Some suggested that art can be viewed as "nice but not necessary" (IA28). One programme manager explained that "if we lost our sponsor...it's not such a massive priority that we would bend over backwards to find another one" (IOC11). Financial uncertainty is a reality for many artists, as one explained,

> I do feel insecure because I know that it is hard to still get this kind of work funded even though we're proving its value and my current research project has got data that overwhelmingly supports how art is a really valuable delivery system for science content. (IA28*)*

Several participants made a call for increased financial support through private-sector partnerships or public funding streams to pay for artists' time and the development and dissemination of their work.[48] Some saw potential in accessing research funding to support transdisciplinary[49] collaborations between artists and scientists (IOR21; IR27; IO46). Related to the public engagement discussion that I expand upon in Chapter 9, one researcher suggested that funding needs to continue after an artist returns from Antarctica in order to achieve the full potential of a project through exhibition, publishing and dissemination (IR42).

[45] IOA2; IA3; IA5; IA7; IR10; IOC11; IA12; IA13; IA16; IO23; IA25; IA28; IOA32; IA43; IA45; ICA48.
[46] IOR21; IO30; IR40; IR42; IO49.
[47] IOA2; IOC11; IC17; IC20; IOR21; IA28; IR42; IA44.
[48] IA16; IA19; IOR21; IO26; IR27; IA28; IR42; IA45.
[49] The definition of *transdisciplinary* that I use here is "research that traverses across and beyond scientific disciplines, and engages research users and other key stakeholders in its design and execution" (Mitchell et al., 2017, p. 2).

4.7 Interpersonal connections

In addition to leadership and organisational support, interpersonal relations can have a major impact on artists and their work, with both negative and positive experiences reported. A few artists who had travelled with NAPs reported feeling isolated, disconnected (IC20; IO22; IA38) and at times, experiencing direct hostility (IOA32; IA34). Some suspected there was a tension around resources and the allocation of a place for an artist rather than a scientist or station personnel.[50] This suspicion was borne out in other responses, as the use of resources was the main concern of those critical of artists' presence (EIP5; IA16; IO23; IA44). However, one scientist reported a preference for including artists in his field team as they performed so well (IR39).

In post-visit evaluations (BAS, 2005a, 2005b), a common observation was that "It would have been helpful if the other people on the station had been told what I was doing" (IA12). Two artists reported having to overcome the perception that they were "in the way" (IA38; IA45), but as one recounted, "once they observed me working longer hours than they did for zero wages they realized I was not just another annoying observer" (IA45). In some cases, the base personnel themselves could be "in the way". One artist explained that "there were people who were put in positions of power who were too young and too inexperienced in how to deal with people, and so would make life quite difficult if you let them" (IA5). In contrast, several artists reported being welcomed and encouraged, "there was such great camaraderie with everyone that was there, and everyone supported each other in extremely positive ways" (IA43).[51] Another felt valued throughout her experience:

> *Every time I went somewhere there was huge respect for the work that I was doing as significant for the [NAP] programme...I was greeted by [the] head of station to ensure that I had everything I needed to accomplish what I was there to do...it didn't matter if I was an artist or a scientist...the programme was there to support the proposal that had been approved. (IA33)*

Some encountered situations where scientists' perceptions of their research status influenced how they were treated. Working in Antarctica as a component of a PhD or winning national awards had a positive impact on how artists felt they were viewed (IA34; IOA32):

> *That year I won a Guggenheim fellowship. There were many scientists looking for Guggenheim fellowships in their areas, and when I received it in art in relation to my work in Antarctica, they all said, "Oh my God! It must be important." (IOA32)*

The learning gained through conversations with people on their journey south, on base and in the field was, for many, as important as the physical experience of being there.[52] This cannot be underestimated. These interactions, only possible through a shared experience, provided insights and enabled connections with people and ideas that advanced the development of the artist's thinking and artwork (IA5; IA12; IA19). For several artists the connections they made and the conversations they had were a vital part of their understanding of Antarctica and the development of their work (IA5; IOR21; IC35). An example of this is described in the film *Te Whakairo – Ngā-Kī o Te Tai Ao | The Carvings Carry the Stories of the World* (Wells, Director) (2020). In the film, carvers

[50] IA5; IA12; IA19; IOA32; IA34.

[51] Anecdotally I am aware of other Antarctic personnel and visitors experiencing a similar sense of the comradery of a community of support. Research into this would be required to confirm or deny this as a common aspect of Antarctic sociality and psychology.

[52] IA3; IA5; IA7; IOC8; IA12; IA16.

Poutama Hetaraka (Ngāti Wai, Ngāi Tahu ki Wairewa) and James York (Ngāi Tahu ki Ōraka Aparima, Ngā Puhi) talk about the connection that they made with marine biologist Regina Eisert when they travelled with Antarctica New Zealand to carve and install a whakairo at Scott Base research station. Hetaraka and York explain that they were interested to learn about Eisert's research on Type C killer whales, which contributed to monitoring the ecological health and effectiveness of the Ross Sea Marine Protected Area (MPA). Equally, Eisert explains that she was interested to learn about Māori traditional knowledge of the whale species that she was studying (Eisert, 2020, 05:40). York states that he Hetaraka and Eisert "connected with each other's korero/story" (York, 2020, 06:06). Discussing the network of life under the ice inspired York's ideas for a spider's web design element in the carving, which symbolises the ecosystem as a whole and the delicate connections between species (York, 2020, 06:12). Whakairo and the artists' explanation of the meaning and symbolism of the project is discussed further in Chapter 8.

As one former programme manager explained, "[artists] have to connect with the people who've been there longer, otherwise [they] miss out on all that accumulated experience" (IOR21). Such engagement requires an openness of attitude from the base and scientific personnel towards artists.[53] The positive influence of connections is particularly evident in the work of Chris Drury. Conversations with scientists were a source of inspiration and data that became the content of much of his Antarctic work (Drury, 2008), examples of which I discuss throughout the thesis. Similarly, another artist spoke about working with a group of scientists, reporting that the work he did was "direct evidence of our collaboration, it wouldn't have happened without those people" (IA34). There are several examples of artists continuing their connections and collaborative relationships with scientists long after first working in Antarctica.[54] Australian animator Lisa Roberts, who visited Antarctica 2001/02, has continued to work with Antarctic scientists and marine biologists since (Roberts, 2019; Roberts & Gladstone 2017). After working at the South Pole with the *IceCube Neutrino Observatory*, Australian/American artist Donald Fortescue extended the collaboration to work with scientists leading the KM3NeT neutrino telescope project in the Mediterranean Sea (Centre for Craft, 2019).

Importantly, these relationships are reciprocal. Furthermore, artists and programme managers reported that the ship and base personnel valued the social, emotional, and intellectual contribution artists made to a ship or base community.[55] Examples given included helping with practical tasks, showing interest in people and their work, giving workshops and lectures, and joining in with social activities.[56] One artist found that both science and trade personnel sought out his company, he described himself as "social glue" (IA45). Another shared that she had been told that she added something "positive...interesting and different" to people's experience because of the way she was able to articulate her observations and aesthetic appreciation of the environment (IA41).

4.8 A question of presence

> *I think artists belong in Antarctica, and scientists think [artists] belong there as well, but in some ways I almost think none of us belong there. (IA34)*

[53] IA5; IR27; IR36; IOA32; IA34; IR39.
[54] IA3; IA19; IA28; IO30; IA34; IA43.
[55] IOA2; IOC8; IA12; IA19; IOR21; IA44; IA45.
[56] IA5; IOC8; IA12; IA19; IOR21; IA45.

The question of who, if anyone, should be visiting and working in Antarctica exercised a few participants.[57] Even scientists themselves recognised, "there are times when there are too many scientists here" (IR36), or as one of them put it, "we have to remove our boots from Antarctica" (IR15). Their concerns were environmentally focussed. The carbon emissions of air and ship travel, and the physical impact of human presence, are difficult to reconcile with environmental protection values. Although one participant perceived human impact to be minimal, considering the vastness of the continent in comparison to the extent of human presence (EIP2), this belies the fact that the narrow strips of ice-free land where most stations and human activity are concentrated are the same areas that have the greatest terrestrial biodiversity, which is extremely sensitive to disturbance (Brooks, Jabour, van den Hoff, & Bergstrom, 2019).

In an analysis of sentiment towards artists working in Antarctica, the overwhelming majority of respondents were in strongly in favour; out of 69 participants who expressed an opinion on the topic 51 (74%) were very supportive. They saw art as a vital dimension of human culture, knowledge and perception. There was criticism from some that the number of artists supported to work in Antarctica is very low.[58] Commenting on the relative dearth of critical artistic inquiry, a few of those interviewed expressed a need for more Antarctic art[59] and more artists in Antarctica.[60] However, three people cautioned against increasing visitor numbers generally due to the environmental impact this could have (ICA14; IA16; IR36). For those who supported the idea of artists working there, it was important to them that artists and their activities did not damage the environment.[61] There was some concern about artists pushing boundaries, either intentionally or through a lack of awareness of protocols and the impact of their actions (IO26; IA41; IA44). In general, there was a view that artists have as much right as anyone to be there as long as they adhered to environmental protection protocols.

Several participants recognised that there are possibilities for creating art without visiting Antarctica.[62] Using scientific data as a source of inspiration and content is one example (BAS, 2018; Miebach, 2017; West et al., 2018). Working with artefacts and archive materials is another (Borissova, 2018; Coldwell, 2013). A consciously imaginary exploration is a further possibility (Cooke, 2013; Finegan, 2012; Kaihao, 2017; Liversidge, 2020). This said, there was also a recognition of the risk of clichés and tropes permeating these works; or the works feeling "flat" and lacking an emotional dimension (IA9; IR10; IA25; IC29). One participant said there was a "step change" in the work of those who have been there (IR10). The distinction came down to the difference between direct and mediated experience.[63] There was agreement that first-hand direct experience was necessary for artists' work to have "depth", "authenticity", and "legitimacy" (IA25; IA43; IR36). As another participant put it, "There's no substitute for lived experience" (IO30). However, as Howkins observes, the simple act of visiting Antarctica lacks meaning, "It is what we do with our visits that matters" (Howkins, 2010, p. 518).

For those artists whose work explores experiencing place, land or landscape, direct sensory and physical experience is critical in their process[64]:

[57] IA3; ICA14; IR15; IA34; SP4.
[58] IC29; IR31; IR36; IA41; IR42; IC50.
[59] IOC11; IOR21; IC29; IO30; IO46.
[60] IOR21; IC29; IO30; IR31; IO46.
[61] EIP1; IOC4; IA6; IA7; ICA14; IR15; IO26; IA34; IA41; IR42; IA44; IA45; IC50; IA51; SP9.
[62] IOC8; IR10; IR15; IO22; IO23; IC29.
[63] IOR1; IA5; IA6; IR10; IOC11.
[64] IA5; IA6; IA7; IA13; IA25; IA45.

> *It's not until you get there that you really realise the complexity and the vastness of the continent...that feeling of the space and the wildness...it gives you a feeling for the real scale; on one hand the detail, on the other hand the vastness. (IOR1)*

For one artist, "all the natural forces that you're not aware of became very evident" (IA12). Another became "closely attuned" to changing weather and its dangers (IA3). For some, experiencing extremity and art making were inseparable: "I wanted the most extreme environment as an experience because that what my work's about; it's a bodily experience of the landscape" (IA5). Several acknowledged that for many artists physical, emotional and sensory experiences and experiential knowledge of a place are at the heart of the art making processes[65]:

> *Touch, smell, hearing, taste and sight all feed data into the strange process of creating art, it seems clear to me that one must be there to work and create art. (IA45)*

Here a cognitive understanding of place is married with a physical and sensory experience. These ideas chime with human geography and the work of Yi Fu Tuan in particular. For Tuan, "Experience is a cover-all term for the various modes through which a person knows and constructs a reality" (Tuan, 1977, p. 8). Physical, emotional and sensory experience are essential components of the conceptual construction of a place, transforming an undifferentiated space into a known and knowable place (Tuan, 1977). Tuan explains,

> *Place is known not only through the eyes and mind but also through the more passive and direct modes of experience...To know a place fully means both to understand it in an abstract way and to know it as one person knows another. At a high theoretical level, places are points in a spatial system. At the opposite extreme, they are strong visceral feelings. (Tuan, 1975, p. 152)*

Furthermore, Tuan explains that feeling and thought are not opposing subjective and objective ideas, rather they are at either end of a continuum of experience, "both are ways of knowing" (Tuan, 1977, p. 10). Corresponding with ideas of lived-world experiential knowledge (Kincheloe & Steinberg, 2008, p. 136), two artists who discussed their work in the context of their Indigenous cultural heritage described embodied experiential knowledge as central and essential to their engagement with, and understanding of, the world. Linking back to the discussion about time factors, three respondents spoke of the necessity of becoming familiar with a place through spending time there (IA34) to "turn a space into a place" (IA45). One scientist's view was that "an artist responds to the environment only after they've been there and let the environment soak into their psyche" (IR36).

A common theme was that the experience of Antarctica was markedly different to anything artists had imagined or experienced before, which inevitably had an impact on their work. Artists will often discard their initial ideas on arrival. As one of them explained, "nothing was as you thought it would be and everything was a hundred times better" (IA5). The Antarctic experience can be transformative. Several artists appreciated that they were accessing places and research operations that very few people, and even fewer artists, had experienced (IA25; IO49). Two spoke of the necessity of being open to challenge and being changed by the experience (IA3; IA5). Shifts in perceptions of the planet, the environment and life priorities can have a profound impact on those who visit and their work.[66] For some, this transformation is a large part of the reason for going (IA5), allowing "the experience to have its impacts" (IA3). An artist said that "it broadened my way of having conversations through art...that experience is pushing me to evolve...it's beyond what I

[65] IOR1; IA3; IA9; IA12; IC29; IO30; IA45.
[66] IA3; IA5; IA12; IO22; IO23; IO30; IOA32; ICA48.

anticipated" (IA43). Another described getting "more than just superficial knowledge; I got an education" (IA38). For many the experience provided ideas and inspiration for a lifetime of art making.[67] Several described their practice as "fieldwork" (IA34; IA43), "research" (IA33) and "data gathering" (IA28):

> *I'm taking measurements in the same way as a scientist will be taking measurements […I'm exploring] the tenor of human nature within a place like Antarctica. (IA33)*

Such responses demonstrate the necessity of physical presence to observe, experience, question, interact and respond.

4.9 Values and behaviours

As touched upon earlier in this chapter, participants felt that working in Antarctica required conformity to certain environmental and behavioural standards (IO26; IA41; IA44; ICA48). There were some areas of tension concerning a minority of artists who were described as being,

> *So focussed on their project and not having much empathy or being very conscious of their environment, their safety, or their contribution to the whole thing...it doesn't always fit in that kind of community down there. (IA44)*

Others felt that some artists can be demanding as "their ego can get in the way" (IA34; IR36; IA44). Although the number of issues involving artists seemed to be very few, the bad impression left by one or two had the potential to establish a negative reputation, making it harder for other artists to follow (IA44). Respondents disapproved of artists perceived to be seeking notoriety, or personal gain from being in Antarctica (IR41; IA44; ICA48). Self-interest was frowned upon (IC18; IA34; ICA48); as were artistic actions considered to be eccentric, or "stunts" (IR42; ICA48). Cultural professionals (including curators, art dealers and funders) who had been involved in selecting artists for Antarctic art programmes spoke of filtering out applicants with these character traits; they actively avoided people who were perceived to be self-centred and interested in the opportunity for fame or commercial success (IC18; IOA32; ICA48). The prevailing idea was that working in Antarctica has a greater purpose beyond individual interest or advancement:

> *When you go to Antarctica it is not about the person, it's about everybody; it is about humanity [and] collaboration…leaving a little bit of yourself behind, and doing things that can be not only good for you, but good for more people. (ICA48)*

Similarly, for some artists their sense of responsibility led them to question themselves and their work (IA3; IA16; IA44). As one artist explained, "What good use can we put ourselves to as artists...Why am I doing this? What's the purpose? How is it helpful to more than just me?" (IA3).

Speaking about environmental factors, respondents criticised a minority of artists, who had accessed Antarctica via tourism, for an insufficient knowledge about Antarctica and having "not done their homework" (ICA14; IR36; IA44). The Antarctic context presented important considerations for artists and their practice. As one participant pointed out, "The artist has to be well informed to work there responsibly" (IA44). The Antarctic legal and environmental contexts can be unfamiliar territories for many visitors (scientists, tourists as well as artists), yet these contexts have, to a significant extent,

[67] IOA2; IA5; IOC11; IA25; IO30; IA43.

informed values that are associated with Antarctica. The description and definition of Antarctica as a "protected natural reserve" enshrined in the Madrid Protocol extends the Antarctic Treaty's designation of the continent for peace and science. The Protocol introduced extensive environmental protection obligations concerning human activity, thereby strengthening environmental values within the ATS, and within the policies and practices of those operating in Antarctica. Although the Protocol is a contractual agreement between ATCPs, its values are upheld in the Antarctic tourism industry via the International Association of Antarctic Tour Operators (IAATO).[68] The negotiators of the ATS did not foresee the development of tourism, which is now responsible for the greatest number of visitors to the continent. Consequently, the ATS is not a regulatory body for tourism. As a membership organisation of tour operators, IAATO has taken a proactive approach to implementing environmental protection management regimes (IAATO, 2020b). IAATO's monitoring and reporting mechanisms demonstrate to the ATCPs their commitment to environmental protection, whilst only maintaining regulatory control of their industry. Tourism management protocols, staff training and passenger education are designed to minimise environmental impact. Yet the ideas of some artists who have travelled to Antarctic on a tourist vessel were seen to unwittingly, or in some cases deliberately, challenge environmental principles and protocols (IOA2; ICA14; IA44). Anecdotally, a minority of artists were reported to have planned and carried out artistic acts that involved throwing objects overboard into the ocean, transporting items that breached biosecurity rules, and failing to heed the hazards and safety considerations. Although few in number, these instances indicate a lack of understanding or engagement with legal, environmental and safety protocols. Interestingly, none of those interviewed reported instances of such conduct within NAP art programmes, which perhaps is an indication of a greater rigour in selection processes, and the type of supervised access that NAP artists experience.

4.10 Concluding observations

A number of factors enable artists to work in Antarctica and set parameters for their activity. The legal and environmental context promotes certain values, attitudes and behaviours towards working there. Participants felt strongly that artists with an altruistic outlook are preferable to those pursuing personal ambition, and that those who work there have a responsibility to be considerate of and protective towards the non-human environment. Artists and scientists alike are acutely aware that conflicts exist between working in Antarctica and the environmental impact of being there, yet this is not easily resolved. The work of many artists requires experiential knowledge. They must engage with a place physically, cognitively and conceptually through their body, their senses and their mind. Furthermore, some artists' work derives directly from conversations with and access to people and places whilst in Antarctica. These ways of working require time to achieve a depth of engagement. The length of time spent at a given location and the potential to visit over multiple seasons are important factors. Although there are several potential access routes, opportunities for artists to work in Antarctica are scarce and, as Chapter 3 revealed, these have drastically reduced in recent years. Access is contingent upon the vision of those in leadership positions who have the power to create or withdraw avenues of entry. Commitment of senior management and the recognition of the value of art within strategy and policy is required to ensure the creation and longevity of art programmes. Furthermore, articulating and championing the value of artists at a senior level is essential to foster a culture in which artists' worth is recognised across the organisation and in communication with the public.

[68] Most Antarctic tour operators are IAATO members. A minority of independent yacht and leisure sailors are not.

5 Socio-cultural realities and perspectives of Antarctic culture

Note: Indigenous and Torres Strait Islander Australians are advised that this chapter contains the names of people now deceased.

Based on desk research and with reference to artists and their work, the first section of this chapter is concerned with cultural diversity and takes as its starting point the decline in diversity identified in the Chapter 3. In recognition of the different meanings and political application of terminology associated with this topic, the chapter opens with a definition of terms. The discussion that follows asks who the creators of Antarctic visual art are and what the implications are of this. The intention here is to explore the value of diversity to our knowledge and understandings of Antarctica. This discussion has particular relevance and urgency considering the dramatic decline in the number and diversity of artists since 2017, which followed a period of substantial increases in diversity between 2004/05 and 2016/17.

The second part of the chapter has a focus on gender. The number of male and female artists working in Antarctica is similar, and therefore does not raise a cause for concern in terms of equality of opportunity. Nevertheless, there is evidence that culturally Antarctica remains a masculine and discriminatory space (Nash & Nielsen, 2020). Visitor responses to an exhibition of contemporary Antarctic art demonstrate that artists enable viewers to think critically about the values and attitudes reflected in a *man-made* environment. The discussion draws on the work of scholars and artists who have explored and deconstructed representations of Antarctic masculinities, revealing that the lens of gender and critical theory are valuable in our understandings of human activity in Antarctica and the construction of Antarctic cultures.

5.1 A note on terminology

In the first part of this chapter, the terms cultural diversity, ethnicity, race, black artists, Indigenous artists, and whiteness are used. These terms require explanation and definition to ensure my usage and meaning is clear. This terminology can be problematic and contentious as both the origins of the meanings of words and the homogenising tendency of some terms can be offensive to some. It is also important to recognise that words, meaning and usage can vary and change over time. With these considerations in mind, I have endeavoured to use language in a sensitive way that enables open and serious discussion about the important topic of inequality, race and Antarctic whiteness.

Cultural diversity*:* While cultural diversity can encompass ethnicity, gender identity, disability and sexual orientation, I use the term specifically in relation to nationality and ethnicity. I recognise that nationality is an extremely blunt indicator of cultural diversity and does not reveal anything of a person's ethnicity or cultural heritage. However, nationality as an indicator of diversity is helpful in the international context of the discussion.

Ethnicity: I use this term to refer to a person's cultural identity as distinct from their nationality.

Race: I use the term in full recognition that race has no biological or scientific basis. Borne out of anthropology and psychology as a classification and ranking of ethnic groups by physiology and intelligence, the term is rooted in colonial racism and notions of white supremacy (Donnor & Ladson-Billings, 2018, p. 199). Although the concept of race has no biological basis, racism persists, advantaging some and disadvantaging other groups of people. In this context race has cultural and

political significance and it is “the most viable and reliable analytical tool for holistically understanding and improving the collective fortunes of the people of color” (Donnor & Ladson-Billings, 2018, p. 196).

Black artists: There are political applications of the term *black*, which necessitates an explanation of usage. In the UK political blackness aimed to unite in a collective struggle all groups of people who faced discrimination based on skin colour (Loury, Modood, & Teles, 2005). However, used in this way black becomes a homogenising term that is problematic as, not only does it prevent recognition of diversity, it also fails to recognise that some people within this homogenous grouping perpetuate racism towards people with different ethnicities (Modood, 1994). For this reason, I do not use the term black in this political and broad sense, I use the term specifically to recognise people with African or Aboriginal or Torres Strait Islander ancestry. Where known I state an artist’s ethnicity as they define it themselves.

Indigenous, Aboriginal, and First Nations artists: To show respect for and acknowledgement of the heritage and ancestry of the original inhabitants of a land I use the terms Indigenous, Aboriginal or First Nations. Recognising these terms are not universally accepted, they are not interchangeable and they have the potential to cause offence (Korff, 2020; Solonec, 2015), I have endeavoured to use the terms according to the preference of the artist or of the group. Where known I acknowledge an artist’s specific cultural identity.

Whiteness: In the context of racial discourse, I use the term whiteness to describe the privilege of white people and the operation of this privilege as an unseen, unquestioned societal norm (Leonardo, 2002). Whiteness manifests itself in thoughts, actions and the operations and outcomes of institutions and systems (Bhopal, 2018).

5.2 Race, whiteness and cultural diversity

> *Here it is so white...It is astonishingly white...It is white white; white piled on to white...the fidelity shown towards white is breathtaking. Of course, white is all it knows, and it has worked hard to build a world out of white...The duty to whiteness is rigorously upheld. (Jones, 2014, p. 7)*
>
> *Antarctica isn’t a place where you think about “blackness”...Let’s push boundaries, shuffle the deck of perceived expectations and see what pops out. (Miller, 2011, p. 122)*

Until the turn of the 21st century, artists visiting and working in Antarctica were almost entirely from Western nations. Cultural diversity (based on nationality alone) increased significantly between 2004 and 2017, as shown in Figure 9, Chapter 3. Within this period NAPs in Africa, Asia and South America began to support artists, and the number of artists from across the world using tourism as an access route increased. These changes resulted in a wider range of nationalities represented in the Antarctic artists alumni. Since 2017 this diversity has declined, returning to pre-2001 figures. I acknowledge that nationality does not describe an artist’s ethnicity or cultural identity. Consequently, an interpretation of cultural diversity based on Figure 9 has significant limitations. Nevertheless, nationality is a useful starting point as it enables a discussion of artworks in relation to an artist’s nationality and their country’s cultures and art histories. Furthermore, there are some published materials where artists discuss their work directly in relation to their ethnicity and cultural background, which adds a significant dimension to a discussion about the value of diverse perspectives.

But why is it necessary to talk about race? Scholars who advocate post-racialism argue that the removal of race as a social category is the most legitimate method for ensuring people are treated equally (Cho, 2008). However, as Donnor and Ladson-Billings point out, a *colourblind* approach decontextualizes the interrelationships between "race, opportunity, exclusion, marginalisation and exploitation" (Donnor & Ladson-Billings, 2018, p. 196). The emphasis in much of the discussion below reflects ideas found in critical race theory, which dispels notions of post-racial colour blindness in an effort to "remedy the disparities that are prevalent in our society […and] assert that race still matters" (Donnor & Ladson-Billings, 2018, p. 209).

Even with the increases in nationality and cultural diversity described above, the majority of artists who have worked in Antarctica are white and Western: black artists are largely absent. This may reflect a bias found in the Antarctic community more generally. An artist I interviewed who lived in a culturally diverse community in the USA commented on the overly white community of McMurdo station, "it was a very stark contrast...anyone who looked different stood out in a way that was probably frustrating for them" (IA43). This is concerning and it raises questions about whiteness, inequality and whether there are barriers and biases within social and institutional structures that prevent access. The culturally diverse countries of the USA, Australia and New Zealand have supported the most artists to travel to Antarctica, which prompts the question whether or not their artists alumni reflect their country's diversity. Two of those interviewed expressed concern that currently the Antarctic research communities are not representative of a country's wider social and cultural demographic profile, specifically in relation to race and social class (IR42; IO46).

Considering that artists view and interpret their experiences and observations through their own cultural and socio-political lens, and that they use this lens to construct and communicate their interpretations through their artwork, this would suggest that a valuable dimension of diversity is a range of cultural and socio-political interpretations of Antarctica. Declines in and absences of cultural diversity raise important questions about who the makers of Antarctic culture and identity are.[69] Whose identities and cultures are reflected in representations and interpretations of Antarctica? Through what cultural and critical lenses are these representations constructed? To whom does the cultural legacy of contemporary Antarctic art belong? With reference to the research question asking what the key considerations for the future of artists working in Antarctica are, the discussion in this section aims to explore the value of cultural diversity and consider Antarctic art and cultural heritage through a political and racial reading of whiteness. Although as a white European woman I cannot speak from a place of black or Indigenous cultural experience, when interrogating whiteness it is the prejudice of white culture that is under scrutiny, therefore from my position as a white person it is entirely appropriate to question and challenge white bias.

While the examples I provide in the discussion demonstrate that artists from different cultures and countries can provide different philosophical and political interpretations of the Antarctic space, I must emphasize that it is not my intention to distil cultural identity and ethnicity into essential stereotypes. In providing these examples I aim only to show that socio-cultural heritage can inform and proffer various readings and interpretations of the world. An artist's work, while understandably and unavoidably shaped by various socio-cultural and political influences, is also individual to that artist. That is to say, people may share a cultural identity yet have very different perspectives of the world and create different interpretations and artworks as a result.

[69] Here identity refers to a set of ideas, beliefs, traits or descriptors that a person or group identifies with and which provide a sense of cultural belonging (Weedon, 2004).

5.3 Whiteness and historic Antarctic cultural narratives

Images of Earth from Space confirm that, on the surface at least, Antarctica is a white continent. White as a descriptor not only applies to the continent's ice and snow, it has many cultural and political associations. Although the colours black and white have both positive and negative symbolic meanings in cultures across the world (Tuan, 1974, p. 25), in Antarctic cultural texts the colour white holds firm as a signifier of purity (Leane, 2012). The most widely recounted Antarctic histories are those of the feats (and defeats) of white Western men penetrating and seeking to conquer a virgin pure territory. In the context of Antarctica as a *terra nullius*, the white expanse signifies an unoccupied territory (Collis, 2004); a blank page or tabula rasa (Leane, 2012); a space for narratives to be inscribed and performed. Whiteness, van der Watt and & Swart suggest, has become a metonym for the continent, "imbued with cultural connections of purity, fragility and even superiority" (van der Watt & Swart, 2016, p. 126). Until recently, there had been little critical examination of the cultural and political geographies of Antarctic whiteness. There is now a growing body of work interrogating and problematizing the constructions of white Antarctic histories and imaginaries (Dodds & Collis, 2017; Dodds & Yusoff, 2005; Maddison, 2020; Mancilla, 2019; van der Watt & Swart, 2016). These critical readings of history and identity expose the prejudices and operations of power and subjugation contained within. They also expose how cultural texts (including images and the curation of artefact displays) serve to perpetuate a "whitening" of the Antarctic space (Dodds & Yusoff, 2005, p. 150).

Figure 14. John Walsh. *Breaking News*, 2008. Antarctica New Zealand collection. ©the artist. Reproduced with permission.

Alternative narratives to white Western exploration do exist. In an account of Chinese maritime history, although the cartographic evidence is disputed (Masson, 2006), it is suggested that Chinese "treasure ships" may have ventured deep into the Southern Ocean 35 years before Captain James Cook's recorded crossing of the Antarctic Circle (Menzies, 2003). Māori oral history tells us that Polynesian navigator Ui-te-Rangiora (also Hui Te Rangiora) ventured into the far south over a thousand years before Cook (McAnergney, 2011; McFarlane, 2008). Stories relay sailing into the area

later named the Ross Sea after explorer Sir James Clark Ross[70] and seeing the smoke rise from the "Smoking Ice Mountain" which is thought to be the volcano now known as Mount Erebus, named after one of Ross' ships (McAnergney, 2011, pp. 120-121). This far south voyaging heritage is acknowledged in the painting *Breaking News*, which depicts a Māori waka emerging from an iceberg (Figure 14). The painting, which hangs in Antarctica New Zealand's headquarters in Christchurch, is the work of John Walsh (Te Aitanga a Hauiti), who travelled to Antarctica with the Antarctica New Zealand art programme in 2007/08. In contrast, a historic juxtaposition from 1910-1912 reveals an elevation of a white narrative and the suppression of Indigenous narratives. British Naval Captain Robert Falcon Scott is one of the most recognised and discussed Antarctic explorers (Leane, 2012), remembered for his death and the demise of his South Pole party in 1912 after their failed attempt to be the first to reach the geographic South Pole. Far fewer people have heard of Lieutenant Nobu Shirase who led the Japanese expedition during the same period (Shirase Antarctic Expedition Supporters Association, 2011). The ship's captain Naokichi Nomura produced drawings and paintings of Antarctica that reflect the stylistic traditions of Japanese visual culture (Dagnell, Shibata, & Nankyoku Tanken, 2011). Notably, his team included Yasanosuke Yamabe and Shinkichi Hanamori, two Indigenous residents of a then subarctic province of Japan, now a Russian territory (Maddison, 2020, p. 139). Shirase's was one of a number of Antarctic expeditions to include Indigenous men and benefit from their knowledge and technologies.[71] However, it is revealing that a commonality between the expeditions that did utilise such knowledge was an attempt to diminish or erase indigeneity in expedition accounts. Maddison observes that these erasures served to create "white-supremacist representations of colonial exploration and expansion as the autonomous activity and achievement of the European middle class" (Maddison, 2020, p. 137).

In terms of art, historically, Antarctic art and imagery have served a predominantly white Western masculine and imperialist agenda. The topographic paintings of coastlines, records of flora and fauna[72] and depictions of expedition activities all served sovereign purposes associated with the claiming of territory and assessment of exploitable resources. Until beyond the mid-20th century the meta-narrative of the canon of Western art history reflected the same cultural prejudices. This was evident in both whose art was included (female and black artists were excluded), and in how art was categorised and described. "Primitive art", a derogatory term loaded with ideas of cultural superiority, was a label assigned to much non-Western art (Christensen, 1955; Maksic & Meskil, 1973; Pownall, 1972; Wingert, 1962). Presentation of art and cultural objects in museums has been criticised not only for viewing objects out of context, but also for exoticizing, essentialising and misrepresenting cultures and peoples in ways that reinforce false notions of white and Western superiority, perpetuating colonial power structures and relationships (McEvilley, 1992).[73] It was the social and political activism of the mid-20th century, which challenged this discrimination. During the

[70] See Dodds and Yusoff (2005) for an account of placing naming as a continuation of problematic colonial practices.

[71] Persen Savio and Ole Must, Sami people from northern Scandinavia accompanied Carsten Borchgrevink's expedition in 1899-1900 (Borchgrevink, 1901). Both Roald Amundsen specifically sought out Inuit knowledge to inform his clothing and overland travel techniques. See Maddison (2015, 2020) for detailed analysis of Antarctic exploration and indigeneity in historic expeditions.

[72] In the minds of imperialists, First Nations people were considered fauna rather than equal human beings. In the case of the colonialization of Australia, Aboriginal people were not recognised as such and the land was declared terra nullius i.e. unoccupied. Subjugation, exploitation and killing often accompanied such attitudes (Aboriginal Heritage Office, 2020; R. J. Miller, Ruru, Behrendt, & Lindberg, 2010; Ryan, 2012).

[73] In response to the *Black Lives Matter* social justice protests in June 2020, Canterbury Museum in Christchurch New Zealand apologised for, but is yet to remove, a culturally offensive display misrepresenting Māori culture. The display which was installed in 1992, has attracted requests from one of the museum board members for it to be removed since 2005 (Broughton, 2020).

1950-1970s, critical discourse both informed, and flourished as a result of civil rights and equality movements. In academia, critical theory enabled examination of socio-political structures, cultural production and reproduction of culture to expose ingrained prejudices. During this period canonical structures were challenged and artists, curators and critics critically engaged with issues of race, class, gender and other sites of social inequality (Harris, 2001; Pinder, 2013; G. Pollock, 1999). Against this historic, cultural and political backdrop, I now turn attention to discussing a selection of artists and artworks to unpack some of the concepts of whiteness, post-colonialism and the value of cultural diversity. I have chosen artists and artworks in which the artist's ethnicity and/or the work itself are significant in critical discussions of diversity. The discussion includes artists with different nationalities and cultural identities including but not limited to black, white and Indigenous artists.

5.4 Looking beyond surfaces

In 1993, in recognition of the United Nations Year of World's Indigenous People,[74] the AAD actively sought applications to their art programme from Aboriginal and Torres Strait Islander artists (Koori Mail, 1994). Artists Lin Onus (1948-1996) and Miriam-Rose Ungunmerr-Baumann were selected, and travelled by ship to Casey Station. "Artists experience the white wilderness", the title of an article reporting on their time in Antarctica (Koori Mail, 1994), has a double meaning. One reading is simply that the artists visited a remote icy world. Another more politically charged reading is that of the artists entering a politically and culturally white space. The article notes that, up until this targeted recruitment effort, the art programme had not attracted Aboriginal or Torres Strait Islander applicants (Koori Mail, 1994). Interestingly, both artists have bicultural identities. Onus was an artist and an activist, born to a Scottish mother and a father from the Yorta Yorta people of Victoria. Ungunmerr, a Nganiwumirri woman, an artist, activist and educator from the Nauiyu area of the Northern Territory, "walks in two worlds" as an Aboriginal elder and practising Christian (Ungunmerr Baumann & Wells, 2007). I have been unable to source any examples of Ungunmerr's Antarctic-inspired artwork, and consequently, the next part of the discussion focusses on Onus.

Onus' cultural and political identities came together in his work in which he drew on his dual-heritage experience to interrogate and challenge the impact and operations of colonialism (Lüthi, 1996, p. 50). A powerful example of this is his work *They took the children away*, which depicts the brutality of the colonial policy of removing Aboriginal children from their families (Figure 15). One of the last paintings Onus produced, *wadarrawadarr boui guyi*, 1996 (Figure 16), has clear Antarctic references. While the depiction of an expansive icy ocean is a familiar trope in many artists' Antarctic paintings, in this work Onus has included a fish with rarrk[75] markings swimming in the foreground. The fish, a signature character that appears in many of Onus' paintings, can be read as a form of self-portrait. Onus said of the animals he represented in his work, "They're part of me and I'm part of them" (Neale, 1996, p. 15). Therefore, symbolically, the artist has embedded Koori

[74] The intention of the UN Year of World's Indigenous People was to improve the economic, social and cultural situation of Indigenous people through initiatives, policy and policy implementation (United Nations General Assembly, 1991). With the same intention of improving Indigenous people's rights and dignities through policy and action, the UN General Assembly proclaimed 1995-2004 the first International Decade of the World's Indigenous People (United Nations General Assembly, 1994); in 2004 the second International Decade of the World's Indigenous People commenced (United Nations General Assembly, 2004).

[75] Rarrk are the symbolic striped markings used in traditional bark painting of the Maningrida and Garmedi communities of Arnhem Land. As an adult Onus was welcomed into these communities and given permission to use rarrk in his work (Neale, 1996, p. 14).

identity [76] within his representation of Antarctica and the Southern Ocean. Equally symbolic is the fish motif drawing the viewer's eye into the water; the idea of "seeing beyond the surface" both culturally and politically is a metaphor that Onus frequently employed in his work (Desmond, 2019).

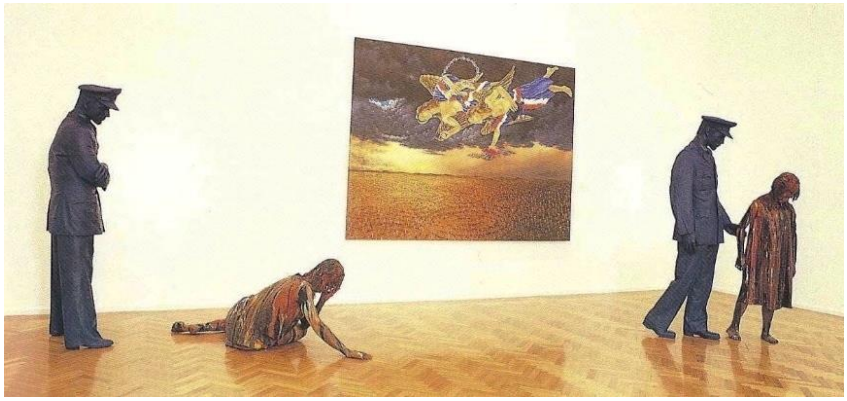


Figure 15. Lin Onus. *They took the children away*, 1992. Private collection. ©the artist. Permission requested.

Figure 16. Lin Onus. *wadarrawadarr boui guyi*, 1996. ©the artist. Permission requested.

Wadarrawadarr boui guyi may be the only Antarctic-inspired work that Onus painted, as he died prematurely at the age of forty-seven only two years after he returned from Antarctica. His sudden death was not only devastating for his family and community, the world also lost a respected and influential artist. Considering cultural critique was at the core of Onus' work, had he lived, any Antarctic-focussed work he produced would have added to cultural readings and interpretations of the Antarctic space. Onus' son and daughter note that when their father passed away his studio was full of blank canvases: "He had said that for the first time in his life he knew exactly what he would paint on every one of them" (Onus & Onus, 1996, p. 128). A cruel irony is that the blankness of Onus'

[76] *Koori* derives from the word for people in the Indigenous languages of the coastal groups of central and northern New South Wales. It is a self-identification term widely used in Melbourne in preference over Aborigine which has racist connotations (Broome, 2008; Solonec, 2015).

unpainted canvases mirrors the near absence of black voices in the canon of Antarctic art. It is a notable and a concerning omission that, at the time of writing this thesis, neither Onus nor Ungunmerr were acknowledged on the AAD artists alumni webpage (AAD, 2017b).

5.5 Journeys and perspectives

At the same time as Onus' Antarctic voyage, Tasmanian printmaker Bea Maddock (1934-2016), began working on *Terra Spiritus…with a darker shade of pale* (Figure 17), an artwork which was to contribute to a critical examination of Australia's cultural history and post-colonial conciliations. Born in Tasmania to white Anglican parents, Maddock travelled to Antarctica with ANARE on board *MV Icebird* in 1986/87. It was on her return journey that the sight of the Tasmanian coastline inspired the idea for *Terra Spiritus* (Thomas, 1998). The work, which is a "circumlittoral panorama" of the entire coastline of Tasmania (Zdanowicz, 2011), has deep political and cultural resonances. Maddock used topographical images, text and red ochre pigment to symbolically reference sightings of the land through colonial eyes whilst simultaneously asserting Indigenous perspectives, presence and connections with the land (Zdanowicz, 2011).

Figure 17. Bea Maddock. *TERRA SPIRITUS…with a Darker Shade of Pale*, 1993-98. Panel 13. National Gallery of Australia collection. ©the artist. Permission requested.

Notably, Maddock created the work over the period of time that saw land ownership cases brought to court that culminated in the 1993 *Native Title Act* (Zdanowicz, 2011). While the work does not depict an Antarctic subject matter, the artist credits the development of the idea specifically to journeying back from Antarctica (Thomas, 1998). The depiction and symbolism of coastal profiles are rooted within colonial and Antarctic cultural heritage (Fox, 2005b; Thomas, 1998; Zdanowicz, 2011). Although Maddock's heritage is white Australian, her work is valuable to the discussion of indigeneity and equality, because white privilege is a white issue. Social justice requires white people to examine and challenge the privileges and prejudices of whiteness. As a postcolonial critique, *Terra Spiritus* directs the viewer's gaze towards an examination of whiteness.

5.6 No such thing as separation

Photographer Camille Seaman has worked in the Polar Regions for almost two decades. She exhibits and speaks about her work internationally. Her books *The Big Cloud* (2018), *Melting Away* (2014) and *The Last Iceberg* (2008) document her love of and concern for the natural world. Seaman was born to an African American/Italian mother and a First Nations Shinnecock father. Her surname reflects her native family heritage; the Shinnecock are a fishing community of the south-eastern area

of Long Island whose way of life is reliant on the ocean. Seaman's grandfather influenced the way she sees and feels connected to the natural world. The story she often recounts is of sweating on a hot summer day, and her grandfather pointing out in the clear blue sky the beginnings of a cloud forming. He explained that her beads of perspiration will become part of the clouds that make the rain and feed the plants, the rivers and the seas (Seaman, 2014). Say says that his insights taught her that "there is no such thing as separation...we are literally part of everything" (Seaman, 2014, p. 56). Furthermore, for Seaman every aspect of the natural world is not only connected, everything is related. When Seaman first encountered Polar ice she contemplated her grandfather's lessons and saw the ice as "my relations...my relatives" (Seaman, 2014, p. 75). She explains that when photographing icebergs, she approaches the subject "as if I am making portraits of my ancestors" (Seaman, 2011, 01:35). Her portraits often feature a single iceberg, drawing the viewer's attention to the details and personality of the individual (Figure 18). Her deeply felt connection with the natural world and her concern about the consequences of human-induced environmental change has driven her work of the last twenty years. These ice family portraits seem solemn and sobering, like looking at a dying or departed loved one.

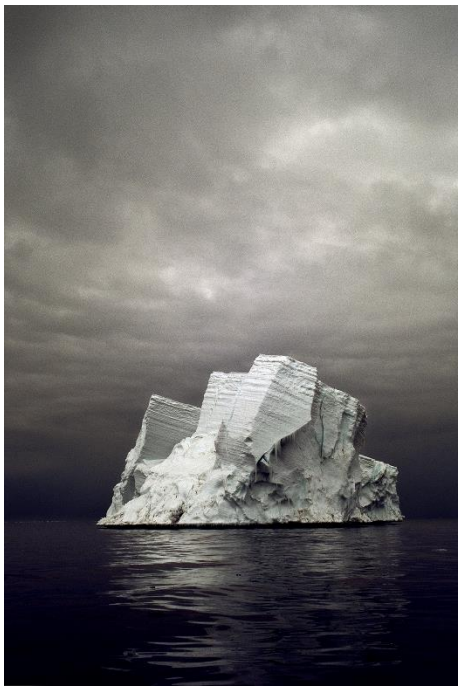


Figure 18. Camille Seaman. *Stranded Iceberg II*, Cape Bird, Antarctica, 2006. ©the artist. Reproduced with permission.

Seaman's images, texts and talks offer audiences a way to see and experience the natural world through her eyes. Furthermore, Seaman's physical presence on the ice (as well as her artwork) is shaping Antarctic cultural history. Reflecting on her experience of standing inside a historic hut, a monument to the white masculinity of Polar exploration, Seaman asks, "who would think that...a Native woman, a black American...could be standing in that place?" (Seaman, 2012, p. 1).

5.7 Elements of energy and harmony

In the 2014/15 summer season Wang Tiande and Zhang Zhengmin travelled to Antarctica on board a tourist ship as part of a group of Chinese artists sponsored by Huafu Art Space in Shanghai (Hong, 2015b). On their return to China, they staged the exhibition *Polar Light, Ink Ocean: Reshaping the Landscape* (Hong, 2015a). The work of both Tiande and Zhengmin offers a perspective of the Antarctic landscape and the natural world that is culturally and aesthetically distinct. Even a rudimentary appreciation of Chinese art and culture reveals that these artworks add a new and valuable dimension to Antarctic art and cultural heritage.

In China, shan shui (meaning mountain and water) is the term for traditional landscape painting (Law, 2011). Shan shui is steeped in philosophical thought and conceptions of nature in which mountains are imbued with "scared power" (Sullivan, 1962). As Sullivan explains, mountains are sacred because in Chinese culture "the cosmic forces, the energy, harmony, and ceaseless renewal of the universe, are in some way made manifest in them" (Sullivan, 1962, p. 2). In Chinese philosophy, the natural world is a "self-generating, complex arrangement of elements that are continuously changing and interacting" (Department of Asian Art, 2004). Within this idea of constant interaction is the concept of yin and yang, which may be thought of as inseparable opposite elements (e.g. light, dark; passive, active; cool, hot). Through constant interaction, yin and yang give rise to the rhythms and endless change in the natural world. Mountains are the places where people have ventured, either physically or through art, to come closer to the "mysterious heart of nature" (Sullivan, 1962, p. 1).

Figure 19. (Left) Wang Tiande. *Hou Shan Series*, 2015. ©the artist. Permission requested.

Figure 20. (Right) Zhang Zhengmin. [*Untitled*], 2015. ©the artist. Permission requested.

Shan shui painters endeavour to portray both the outer appearance and an inner cosmic energy. Over time shan shui paintings have also come to represent human longing to escape the everyday world to reconnect with nature (Law, 2011). Further, according to Daoist beliefs human beings are inseparable from the natural world and should therefore follow the flow of nature's rhythms and

maintain a close relationship with nature for their own moral and physical health (Lin, 2016). With these meanings and symbolism in mind Tiande's and Zhengmin's painting (Figures 19 and 20) add a valuable, and hitherto missing, way to contemplate Antarctica and human interconnection with the natural world.

5.8 Crossing the colour lines

One of the ground breaking projects of the IPY 2007-08, supported by the South African National Antarctic Programme (SANAP), was the international art, science and engineering collaboration *Interpolar Transnational Art Science Constellation* (ITASC). The international ITASC team included black and white South Africans and artists from Brazil, Chile, New Zealand and the USA.[77] A central aim of ITASC was the design and construction of a mobile research station named *ITASC Catabatic Experimental Platform for Antarctic Culture* (ICEPAC). Founded upon the Antarctic values of cooperation and environmental protection, ICEPAC was an experiment in creating a workspace powered entirely on renewable energy where artists and scientists could collaborate (Hug, 2009). ITASC is one of very few arts projects supported by SANAP,[78] and the only one in which black African artists have been involved. As a legacy, ITASC exemplifies the values of cooperation, and more importantly, equality. Given that South Africa's activity in Antarctic in the 20th century reflected the discrimination found in the country's domestic race relations (van der Watt & Swart, 2016), the ICEPAC project marks a significant milestone in South Africa's Antarctic heritage and in Antarctica's cultural heritage more broadly.

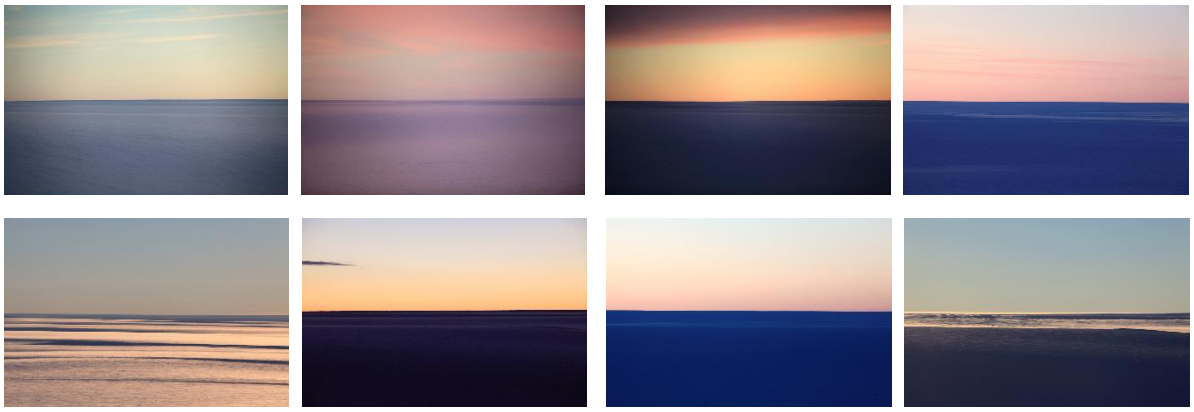


Figure 21. Erika Blumenfeld. *Antarctica Vol. 3 (Ice Horizons)*, 2009. ©the artist. Reproduced with permission.

Interestingly, colour was the conceptual focus in the work of Erika Blumenfeld, one of the ITASC visual artists. Hers was an exploration documenting colour and light phenomena. Figure 21 shows a sample of work from her study of white. Blumenfeld observed, "It would be easy to presume the whiteness of such a landscape, and yet the more time I spend watching the environment each day, the less I believe in white at all" (Blumenfeld, 2009, p. 183). Whilst her observation relates to visible

[77] The ITASC team were: Adam Hyde, New Zealand; Amanda Rodrigues, Brazil; Erika Blumenfeld, USA; Ntsikelelo Ntshingila, South Africa; Pol Taylor, Chile; Rebecca Mattos, Brazil; Siphiwe Ngwenya, South Africa; and Thomas Mulcaire, South Africa (Hug, 2009).

[78] Nerina de Villiers was artist in residence onboard SA Agulhas 2004 and at South Africa's SANAE station 2007. Katrine Classons travelled onboard SA Agulhas II in 2017.

frequencies of light rather than a socio-political comment, nevertheless it offers an evocative metaphor for challenging whiteness.

The ICEPAC project was trailblazing yet there have been no SANAP-supported art initiatives to follow in their tracks. During the SCAR online Open Science Conference in August 2020 a representative of the Antarctic Legacy of South Africa presented a paper titled *Antarctica in Black: Expression of Feelings of Antarctica through Art* (Olivier, 2020). The title and presenting organisation led me to assume the paper might explore the topic of ethnicity and cultural diversity in South African Antarctic art. However, the paper discussed the sketches of white South African scientist Jess Verheul who had travelled to Antarctica as a volunteer with the South African National Space Agency (SANSA) and documented her impressions of continent through a series of ink sketches. The term black in the paper's title was not a demographic reference, it referred only to the colour of Verheul's ink. As interesting as the paper was, what it unintentionally signalled was an absence of black artists' voices. Speaking about SANAP, an Antarctic researcher from South Africa offers some optimism towards a change,

> *For South Africa it would be very valuable to include artists because [it would] throw open the opportunity to do something meaningful...South Africa has a very lively arts community...I think one can also state it bluntly, I think if you do throw it open to more artists then you would probably get more black people going. (IR42)*

In 2007 African American multi-media artist, composer and writer Paul D. Miller travelled to Antarctica on board M/V *Akademik Ioffe*, a Russian-owned Arctic research vessel re-purposed for polar tourism. The many dimensions of the continent's natural, cultural and geopolitical histories inspired Miller's creative responses, which included music, performance, and visual imagery. I discuss the environmental and political dimensions of Miller's artwork in Chapter 8. Here, I want to unpack one of Miller's theoretical, political and philosophical observations. In the last chapter of *The Book of Ice,* a publication in which Miller documents some of his work and the inspiration behind it, he discusses race and culture in the context of Afrofuturism (Miller, 2011). He opens the chapter quoting W. E. B. Du Bois[79] and goes on to state that "In Antarctica, there is no color line. It's a pan-humanist space" (Miller, 2011, p. 122).[80] This statement is instructive to explore. Antarctica is panhuman in the sense that the continent is of interest and concern to the whole of humanity. One articulation of this is the conceptualisation, albeit a contested one, of Antarctica as a global, or international, common of shared natural resources beyond national jurisdictions (Antonello, 2016). Looking beyond the potential to exploit Antarctica's natural resources, changes in the Antarctic environment have a major influence on the environmental future and habitability of the planet, which is a global humanitarian concern. From these two perspectives Antarctic can be conceptualised as a panhuman space. However, whilst the principles in the Antarctic Treaty, namely the abeyance of territorial claims and the encouragement of international cooperation, gives an appearance of international harmony, Antarctica is not a place free of prejudice. The whiteness of Antarctica's cultural history is testament to this. Artistic interpretations of Antarctica have come from a small cultural pool. The cultural diversity of the nations that have supported the artists to work there is not reflected in the cultural diversity of their Antarctic artists alumni. Although there is

[79] W. E. B. Du Bois, an American sociologist and civil rights activist, is remembered for his statement that "The problem of the twentieth century is the problem of the color-line" (Du Bois, 1903).

[80] The term *color line* refers to a socially and politically constructed dividing line that favours one group of people and disadvantages another group of people on racial grounds. It first appeared in 1881 in an essay discussing racial segregation in the USA following the abolition of slavery (Douglass, 1881).

an attractive utopian dimension to Miller's statement, in reality there are colour lines that need to be exposed and challenged. An example from British Antarctic heritage helps illustrates this point.

It is noteworthy that a publication charting British Antarctic art from 1772-2016 (Walton & Pearson, 2006) is entirely comprised of white artists. The title *White Horizons* is disturbingly fitting because the book reflects an absence of black perspectives in its account of British Antarctic cultural history. Significantly, Britain's current Antarctic artist residency programme organised by the Friends of SPRI and hosted by the Royal Navy, which has operated since 2010, also has an entirely white alumni (SPRI, 2020a). This raises some questions. Do black artists know about and apply for the opportunity? If not, why not? What social, political and institutional factors and barriers are involved? If black artists do apply, what is preventing their selection? Most importantly, what can and will be done to change this situation?

5.9 Views of women in the Antarctic cultural space

Antarctica's human history is gendered (Bloom et al., 2008; Chipman, 1986; Glasberg, 2012; Nash & Nielsen, 2020). Up until the second half of the twentieth century the domain of work in Antarctica was consciously exclusively male (Collis, 2009). Although women's presence in Antarctica dates back to the 19th century, when they travelled with their working husbands on sealing and whaling expeditions, their role was one of accompaniment (Chipman, 1986). As highlighted in Chapter 3, artist Nel Law was invited to accompany her husband on a station resupply and relief voyage in 1960/61 (Smith, 2012). In doing so she became the first Australian woman to visit Antarctica. More significantly, she was the first female artist of any nationality to reach the continent, a total of 188 years after her male equivalent (Smith, 2012). Women's appearance in Antarctica as working professionals is a development of the last forty years following a series of pioneering firsts in the preceding years,[81] often in the face of staunch chauvinistic resistance (McCahey, 2021). For women artists, the establishment of NAP art programmes secured a consistent route of access. Although women are now experts and leaders in many realms of Antarctic activity, research into women's experiences has revealed that barriers, discrimination and harassment on gender grounds persist (Nash & Nielsen, 2020; Nash et al., 2019). In light of the persistence of such abuse, it is surprising that gender did not emerge as a strong or recurring theme in my interview data.

In total three artists shared a gender-based observation and experience, two of which were experiences of direct and overt sexism. One of the artists, who travelled with the NSF art programme, did not experience prejudice herself, but she observed that she was the only woman working on base who was also a parent. She was aware of being in a male-dominated environment and one in which sexual harassment towards women had remained unchallenged until recent times (IA43). Another artist, who worked within tourism for several years, described how she was often questioned in ways her male counterparts were not about her choice to work in Antarctica whilst also being a parent (IA41). The subtext being that it is culturally acceptable for fathers to work away from home but mothers are judged negatively for doing so. A third artist encountered negative attitudes on base from some members of the Argentinian scientific community. She found that being both a woman and an artist was a double affront to some of the men, "[they were] against

[81] The first female scientist to conduct a programme of research was Russian geologist Maria Klenova in 1956 (Nash & Nielsen, 2020). The first all-female deep field Antarctic research team worked together in 1969 lead by American geochemist Lois Jones (Chipman, 1986). Some states have been slower than others to address their institutional gender imbalances, Janet Thomson worked inside the Antarctic Circle as a scientist with BAS in 1983, and the first women overwintered with BAS in the 1990s (BAS, 2019a).

women...it should be much better to be a man and a scientist...this [combination] is a perfect format" (IOA32). However, she persevered and continued working in Antarctica over several seasons, and when her work attracted national accolades and awards, she received a sincere apology from one of the men who had been disparaging (IOA32). Although few in number, these instances show that women are acutely aware that Antarctica is a place where they might experience discrimination and abuse.

In terms of the gender balance in the number of artists working in Antarctica, since the introduction of NAP art programme in 1982 the totals have been reasonably even, with the exception of three years where the number of male artists is significantly higher. In 2007/08 most NAP art programmes selected male artists. In 2014/15 a sponsored group of Chinese artists were almost exclusively male. In 2016/17 more male artists than female were selected to participate in the *Antarctic Biennale*. These three occasions alter the overall average from a 45% female 55% male gender spilt to 40% female and 60% male. While these figures reveal there is still work to be done to address inequality, they show a remarkable and welcome increase in the number of female artists working in Antarctica. However, they disguise how the Antarctic is male-dominated in other ways. In particular, masculinities persist in the material and conceptual construction of place and culture (Collis, 2009). Ideas and expressions of power and objectifying attitudes towards women are reproduced in objects, imagery and language. Both Christy Collis and Craig Cormick have written about the resistance to the removal of pornographic imagery in response to the deployment of women in Antarctica (Collis, 2009; Cormick, 2011). They both discuss the "Sistine ceiling" inside Weddell Hut at Mawson Station, a collage of almost 100 pornographic images amassed throughout the 1970s and 1980s at a time when "men were men and women were photos" (Collis, 2009, p. 516). *The Spectator* described the imminent removal of the collage as "sad...that such a ceiling has passed into historical record" (The Spectator, 1998, p. 7). Furthermore, reflecting a desire to maintain the power imbalances, the journalist stated that banning the posting of such imagery was a reflection of a "politically correct world...with a debilitating obsession with race, gender and class consciousness" (The Spectator, 1998, p. 7). The journalist would be pleased to learn that the worshipped ceiling survived for a further eight years after their article was published. When it did eventually come down in 2005 the images and the culture these images represent were preserved for posterity on Mawson Station in a hand-crafted wooden book titled *The Heritage Girls of Mawson* (Cormick, 2011). As such, the collage is granted a form of heritage status. Collis observes, "Heritage is the formal process of assigning places official meaning; the preservation of the Weddell Hut's dated porn signals a desire to valorise and memorialize the [Australian Antarctic Territory's] status as a man's world" (Collis, 2009).

Writing in 1995 Sara Wheeler, an author who travelled with BAS, recollected how pornographic images were used to "get a rise" out of women at the UK's Rothera Station (Nash and Nielsen et al 2019 p3). Eleven years later, around the time that Mawson's *Heritage Girls* book was created, using pornography to provoke a reaction was still alive and well at Rothera Station. In an artwork designed to document human responses to Antarctica, Anne Brodie, an artist who travelled with the BAS art programme in 2006/07, asked Rothera personnel to fill a glass jar anonymously with something that represented their "humanness" and connection to the continent (see Figure 41, Chapter 7 p. 111). One man chose a pornographic image to represent himself (Wells, 2012). An artist who cast an inquiring eye on this aspect of Antarctic male culture is artist Jan Senbergs. He saw the pornographic interior decoration of Antarctic huts first hand when he visited in 1986/87 and recorded his observations in the painting *Antarctic Night* in 1989 (Figure 22). In the centre of the painting is a cross section of a hut that allows the viewer to see inside. The shell of the hut is a cold metallic blue and green box, the world outside the hut is cold blue too. Inside the hut the heat of Senbergs' red

paint emanates from the female bodies pasted on the walls. Although Senbergs does not idolise these images, he did find them “a fascinating reflection of life down there...Whether you like it or not...they do tell a story of what kind of life is lived” (Boyer, 1988). His slashes of red paint cut and carve the naked bodies, the wall appears to be the scene of a massacre. In my reading of this work, Senbergs’ treatment of the subject matter emphasises a sense of violation and dehumanisation.

Figure 22. Jan Senbergs. *Antarctic Night*, 1989. National Gallery of Australia collection. ©the artist. Reproduced with permission.

Anne Noble’s *Bitch in Slippers (Antarctic Inventory)* points the viewer’s gaze directly at a cultural manifestation of male objectification of the female. *Bitch in Slippers* is a collection of images depicting individual vehicles of the USAP fleet, each of which are assigned and painted with a name. The naming and painting of vehicles echo the US tradition of customising aircraft with *nose art* during World War II, as shown in Figure 23. Don Allen, an artist who painted many of the aircraft, describes how these images of women boosted the pilots’ morale and “gave them something to pat before and after every mission” (Barber, 2012, p. 1). He explains that although many of the men wanted “outright nudes”, he “tried to keep the necessary parts covered, even though I wanted to make a tease out of it." (Barber, 2012, p. 1). The names of the USAP vehicles serve a similar morale boosting purpose, and one that satisfies a male-centred morale. The majority of vehicles and machinery in USAPs 250 strong fleet have either a woman’s name, a female designation, or a sexually suggestive reference. Figures 24-26 show two individual images from the *Bitch in Slippers* inventory and the whole collection on exhibition. With the exception of a small minority, there is underlying gender-based objectification in all the names. The names metaphorically transform the vehicles into female forms, recognising this Noble refers to the vehicles as “old girls” with “coloured bodies” (Noble, 2014, p. 26). While *Ice Queen* and *Ice Maiden* appear to be innocuous puns, *Bitch in Slippers* reflects a more hostile humour. Noble reports that the offense *Bitch in Slippers* caused when the name was painted resulted in the naming of vehicles stopping for a time. The persistence of the station’s culture saw the practice “quietly re-emerging” a few years later (Noble, 2014, p. 26).

Figure 23. Ed Uthman. *B-25 Wolf Bait*, Nose Art. Scanned to Wikimedia Commons on 20 September, 2012. Shared under a Creative Commons License. Retrieved 7 January, 2021 from https://commons.wikimedia.org/wiki/File:B-25_Wolf_Bait_Nose_Art.jpg

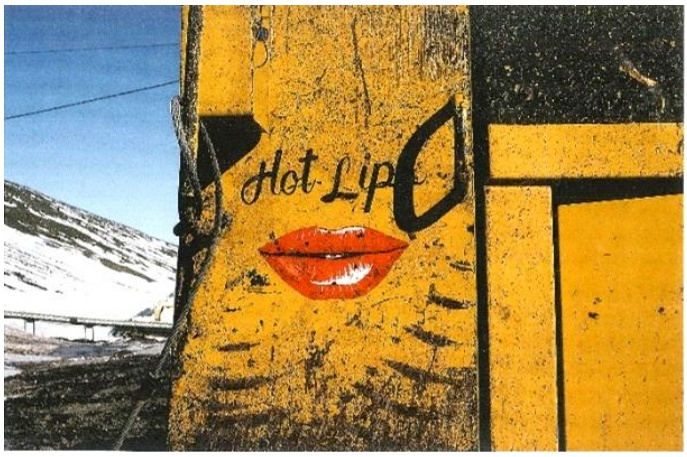


Figure 24. Anne Noble*. Bitch in Slippers: Hot Lips, Antarctic Inventory #17,* 2008. ©the artist. Reproduced with permission.

Figure 25. Anne Noble. *Bitch in Slippers: Brenda, Antarctic Inventory #13*, 2008. ©the artist. Reproduced with permission.

Figure 26. Exhibition: *Phantasm – Discovering Antarctica*, 1 December 2018 – 20 January 2019, Centre for Contemporary Art, Christchurch, New Zealand. Anne Noble. *Bitch in Slippers*, 2008. Photographed by Adele Jackson with permission. ©the artist and the photographer. Reproduced with permission.

Bitch in Slippers (Antarctic Inventory) was on display in the exhibition where I conducted the audience response element of the research. The work provoked strong responses from both survey and interview participants. Out of the nine exhibition respondents, two enjoyed the composition of the images, the vibrant colours of the vehicles and they found the names humorous. However, other respondents expressed views critical of gender inequality and abusive attitudes to women in Antarctica, entirely prompted by viewing and reflecting on the *Bitch in Slippers* artwork. They read the artwork more politically as a "feminist outing of the chauvinistic and demeaning male view" (ESP2). For them the vehicles were laughable rather than good humoured (EIP3). Having read exhibition interpretation material, which highlighted the historic exclusion of women from Antarctica, one of the respondents found the vehicles "repulsive...out of context of where we're at in terms of being a woman today" (EIP4). People felt anger, disgust and repulsion towards the sexist male attitudes that the vehicles exposed (EIP1; EIP4; ESP2). They expressed a desire for change to get rid of the "bloke-iness" (EIP2) remarking that,

> *Work needs doing to alter male attitudes and actions (sense of power and therefore attitude to do/say/act as they please) towards women in every sphere, whether professional or personal. (ESP2)*

Although, as I have shared elsewhere (Jackson, 2019), visitors experienced strong negative emotions, they also appreciated being confronted with subject matter they found uncomfortable. All but one of the respondents had anticipated the exhibition would include images of pristine icy landscapes and icebergs, but they all appreciated having their preconceptions upended with challenging imagery depicting human presence, "it's important to see this other side" (EIP3). They appreciated being shown aspects of Antarctica that they had not seen or considered before (EIP2; EIP3; EIP4; EIP5). One respondent explained,

> *I found it really interesting and rewarding and I'm pleased I went to it. Was it likable? No, probably not...it made me think...my thoughts about Antarctica have evolved further because of it. (EIP2)*

Several of those who had viewed the exhibition suggested it had shown them why it is important for artists to work in Antarctica (EPI1; EIP2; EIP3; EIP4), as one of them put it artists could show the

public “everything that's going on down there” (EIP5). Likewise, as a topic for artistic inquiry, two of the artists I interviewed found their observations of human engagements with Antarctica some of the most compelling aspects of their experience (IA19; IA33). Other participants (scientists, programme managers and artists) suggested that the contemporary cultural aspects of human presence in Antarctica is a subject largely unexamined through Antarctic art. Yet, critical inquiry that examines constructions of place, language, texts and culture in Antarctica is essential to developing our understandings of our presence, identities and values (IOC11; IOR21; IO23). As long as there is human activity in Antarctica, there is an argument for arts-based intellectual investigation of our presence. A former art programme manager commented, **“**Informed observation by others is essential if we are to know anything at all and to make decisions based on this understanding” (IO49).

The instances described above reveal the persistence of objectification of women. Artworks and artefacts that expose these cultural manifestations of male attitudes provide a medium for critical discussion. While I agree with Collis that there is a risk of valorisation through the preservation of certain artefacts, it is a risk worth taking to ensure these objects stand as evidence and allow critical examination of culture and values. Examining such objects enables the ideas they represent to brought to the fore and challenged. The discussion highlights the fact that the conceptualisations of women in the Antarctic cultural space are male constructions. This serves to affirm the need for more women to claim and proclaim their own image, own voice and own identities (Cixous, Cohen, & Cohen, 1976) in the Antarctic cultural space.

Noticeably, the perspectives and experiences of those whose gender identity is nonbinary[82] do not explicitly feature in the data. Although I provided space for participants to define their gender identity in the demographic data that they shared, all of the participants identified as either male or female, or preferred not to say. The topic of nonbinary gender experience, or experience related to a person’s sexual orientation,[83] did not appear in any of the responses. Consequently the discussion above does not reflect the breadth of the subject of equality, diversity and inclusion. Nevertheless, what can be said is that discrimination, especially in the field of science, is an issue (Cech & Waidzunas, 2021), so it is encouraging that work has started within the Antarctic research community to demonstrate support for diversity (SCAR, 2020c).

5.10 Concluding observations

Historically, Antarctica was almost exclusively a white male space. In the 21st century Antarctic whiteness and maleness remain problematic. While the gender balance in artist numbers has improved since the establishment of NAP art programmes in the 1980s, other forms of gender discrimination remain in evidence in Antarctic culture. Artists, artworks and artefacts can helpfully draw attention to the operations and perpetuation of misogyny in Antarctic culture.

Although from 2004 until 2017 there were increases in cultural diversity, with artists from Africa, Asia and South America appearing in the Antarctic artists alumni, since 2017 there has been a decline and a return to a situation where only NAPs of the USA, Australia and New Zealand are supporting artists. Some Antarctic art programmes have not reflected the diversity of their population in their artists alumni. This suggests that unconscious or conscious bias and other barriers

[82] I use the term nonbinary to recognise that people may not identify as either male or female. Nonbinary identification can include gender-nonconforming, gender-neutral, gender fluid, for example.
[83] I refer here to the identities including lesbian, gay, bi-sexual, trans-, queer or questioning (LGBTQ+).

are perpetuating societal and institutional prejudices, privileging one group of people at the expense of another. Bias in Antarctic culture has elevated mostly Western narratives over Indigenous experience, knowledges, skills and technology; and there are very few black and Indigenous artists among the Antarctic artists alumni. As a place where environmental changes have consequences for all of humanity, Antarctica concerns all nations. It is, therefore, a place where diversity in cultural and artistic representation should be enabled. The value of a culturally diverse artists alumni is the variety of philosophical, political and critical engagements that add to our interpretations and understandings of Antarctica and the world we live.

White privilege and the operations of whiteness in Antarctic institutions and opportunities for artists require scrutiny and challenge, as do discriminatory behaviours, attitudes and cultures that artists and others face during their deployment. The discussion has demonstrated that artists contribute meaningfully to socio-political readings and critiques of Antarctic cultures and in doing so they have expanded public knowledge of human presence in Antarctica. An artist's critical engagement with the social and cultural aspects of Antarctic life has much to offer to understanding and development of Antarctic cultures.

6 Geopolitical dimensions of artists' presence and their work

In the previous chapter socio-political considerations framed the discussion. The political framing of the context for artists and their work continues here, but from a geopolitical perspective. The discussion revolves around the idea that conceptual configurations of the Antarctic space and human presence on the continent are geopolitically motivated. Consequently, the terrain for artistic inquiries in Antarctica is inescapably geopolitical. A discussion of how the mapping of Antarctica is not a neutral exercise sets the scene for a discussion of territorial claims as sites of geopolitical relations and tensions. This allows an examination of the influence that these tensions have on human activity in Antarctica. The prevalence of nationalism in the Antarctic political sphere is then examined in relation to the implications this has for Antarctic art programmes and artists' work. A discussion of re-enactments of nationalism and territoriality through heritage narratives leads into an examination of how artists have imagined and presented alternative perspectives through their scrutiny and reconfiguration of geopolitical constructions. Turning attention to the Antarctic meta-principle of international cooperation, the chapter closes with a discussion on transcending national boundaries.

6.1 The politics of mapping Antarctic space

Human understandings of Antarctica have changed over time from an imagined place[84] to a seen, touched and experienced reality. Not only have maps, mapping and topographic records played a central role in the transformation of unknown spaces into knowable and known places (Fox, 2005a), they are instruments of territorial sovereignty. Historically, in the case of colonising nations, maps support claims of having been there, stepped ashore and claimed the land, and they provide the means to return to the region. Maps are conceptual and political descriptions of space. A navigational chart may describe a representation of a topographical reality, however all boundary lines and names are cultural and political inscriptions. As such, the shapes, lines and colours of a map are at the same time an allusion and an illusion.

Artists that critically engage with maps and mapping in their work are often exploring the conceptual, cultural and political constructions and narratives of space (Curtis, 2020; Harrison & Harrison, 2020). In *Terra Nullius – Ownership and Pioneering on Ice*, shown in Figure 27, artist Esther Kokmeijer draws the viewer's attention to the various historic and contemporary overlapping territorial claims and conceptualisations of the Antarctic space. The artwork, which is comprised of thirty-seven different map-based representations of the continent, highlights that cartography is a geopolitical communication device.

[84] Parmenides conceptualised the world as divided into five parallel climate zones. Crates of Mellos proposed the symmetrical idea of four continents, two in the northern hemisphere and two in the south. Aristotle hypothesised the idea of a southern landmass. He named the imagined continent Antarktos, opposite to Arktos, the name he had given to the north polar region (Fox, 2005b).

Figure 27. Esther Kokmeijer. *Terra Nullius – Ownership and Pioneering on Ice*, 2013. Collection of Droom en Daad Foundation, Museum of Migration. ©the artist. Reproduced with permission.

During an interview, an artist observed about his own work and the artwork of other artists that "all work that's about landscape is political" (IA5). His observation was based on a recognition of deep human connections to land. He explained that,

> *Landscape is a very emotive, emotional thing for people. Their landscape is very much in their hearts, people embody their own landscapes. If you take somebody's landscape away or if you interfere with it, or denigrate it, you get into a political row. (IA5)*

In the 19th and 20th centuries when representatives of a state planted their flags on Antarctic land claiming the continent to be *terra nullius*, the motivation was in asserting sovereignty, to secure territory and economic resources. This national interest remains at the root of political sensitivity in Antarctica. Even though the Antarctic Treaty neither recognises nor disputes territorial claims (allowing Parties to disagree on the status of each other's claim), nation-state assertions of sovereign territory is evident in engagements with and descriptions of the Antarctic space.

6.2 The nation-state and nationalism

Ownership and defence of territory is a central tenet in the concept of the nation-state (Billig, 1995; Birch, 1989). Birch observes that "the entire land surface (apart from Antarctica) [is] now divided between nation-states" (Birch, 1989, p. 3). Although seven nations have claimed sections of Antarctica and two nations reserve their basis to a claim,[85] the Antarctic Treaty is designed to

[85] Argentina, Australia, Chile, France, New Zealand, Norway and the United Kingdom have made territorial claims. The USA and Russia reserve the right to do so.

mitigate nation-state tensions concerning ownership and defence through its founding principles of peace,[86] the abeyance of territorial claims, and through encouraging international cooperation.[87] However, even though the Treaty prevents states from acting on their sovereignty claims, and the signatory states uphold this position, many states have established a nationally emblazoned presence in Antarctica to display and maintain their national interests. Domestic political activity, heritage maintenance, and ongoing human activity in Antarctica[88] are some of the ways states enact their position as claimant states. As the Treaty does not permit any new claims to territory or extension of existing claims, states eager to assert their national interests in the Antarctic space have established programmes of "substantial scientific research" in order to achieve Consultative Party status at ATCMs and participate in decision making (Scully, 2011). Aware of the influence of national interests, a small number of research participants expressed cynicism about the motives and activities of states operating in Antarctica. They shared a perception that national interest was the driver of much research activity (IOA2; IA33; IR42; S30). Instances of unnecessary duplication of investigation across Antarctic research and critique concerning the lack of international collaboration were attributed to nations seeking to cement their presence rather than advancing scientific knowledge (IR42).

Territorial and national interests are at the root of human activity in Antarctica. Articulation of nationalism can be through "hot" actions or much more subtle "banal" expressions (Billig, 1995; R. Jones & Merriman, 2009; Skey & Antonsich, 2017). "Flag-waving" through to everyday subtle symbolic gestures are political acts that serve to promote and strengthen the idea of nationhood both in the home state and in international spaces such as Antarctica (Billig, 1995). Irrespective of an artist's intentions, Antarctic art can be utilised as a flag waving gesture, an idea to which I now turn.

6.3 Art programmes and political agendas

One interpretation of Antarctic art programmes supported by NAPs and Antarctic institutions is that they support a state's national interests and agendas. Roberts, Howkins and van der Watt state clearly that "National program sponsored artist visits are fundamentally geopolitical" (Roberts, Howkins, & van der Watt, 2016, p. 13). However, one participant observed that national programmes may not "deliberately and consciously...include artists to make a political point" (IR42). Another pointed out that there are political factors in operation as "each institution has their rules and their politics to follow" (ICA48) and an organisation's values shape the context and criteria for their Antarctic artist programme. State-sponsored artist residencies that are part of a national programme prompt questions about the organisational values at play: to what extent is artistic autonomy and critique compatible with and possible within such programmes? Nicola Triscott, founder and former director of The Arts Catalyst, a UK-based contemporary arts organisation that commissioned art-based research observes that,

[86] The Treaty permits non-weaponised military presence that supports science and other peaceful activity.
[87] In the Treaty context, Article III encourages cooperative relationships through sharing programme plans; sharing scientific observations; and supporting the transfer of personnel to and between research locations.
[88] Examples include: historic evidence of discovery; operating year-round bases and science programmes; operating a currency, in Antarctica this takes the form of stamps; establishing village-like settlements providing facilities such as a school, a place of worship and post office; both Argentina and Chile have transported heavily pregnant nationals to Antarctica in order that they give birth on the continent thereby establishing an ancestral connection (Dodds, 2009).

> *Many artists going to the poles have been – at least in their artistic output – uncritical of the complex social and political context of the poles, producing work which often conforms to the accepted iconography of remoteness, beauty, harshness, challenge and fragility, without a sense of a contested...landscape and the social and historical processes shaping it. There are, of course, exceptions, but it is interesting to see what future art may be produced as artists gain a greater familiarity with, and better understanding of, these regions. (Triscott 2008 p35)*

The stated aim of several programmes is to "develop understanding and appreciation of the Antarctic and of human activities", but as Roberts et al. question, "[is this] a formulation that privileges explication over examination?" (Roberts, Howkins, et al., 2016, p. 13). A scientist who had worked for a NAP for multiple seasons explained that the programme he works for is "sensitive to how it's viewed from the outside...they review the kinds of information that the artists produce...They want the programme to be seen in a good light" (IR40), which in turn influences the selection panel's choice of artist (IR40). Artists may not necessarily have freedom of critical inquiry as programmes "would not necessarily send artists who are very critical of the national policies in Antarctica" (IR42). A participant who had been involved in artists' selection revealed how values come into play with her observation that,

> *If you are working for a national institution you have to be very careful who you choose to go [to] Antarctica. You need [an artist] whose work will have this currency with the place, and not against the place. (ICA48)*

Art is a recognised vehicle for communicating social and political values (MacClancy, 2020). While some artists are explicitly political in the focus and purpose of their work (Smith, Lentz & Buffington, 2020; 2018), the work of others, even if it is not their intention, may be utilised to serve a political agenda.

Art can be used to promote certain values and denounce others. The following examples illustrate this idea. One is an extreme and overt political utilisation of art, the other a more covert exploitation of art and the values art can represent. In 1937 the German Nazi party staged two intentionally contrasting exhibitions in the same vicinity of Munich. The *Deutsche Kunstaustellung* (German Art Exhibition) presented work of which Hitler and his government approved, whereas *Entartete Kunst* (Degenerate Art) showed a selection of the 16,000 artworks that the Nazis had confiscated from museums and public collections (Schuhmacher, 2020). Labelling the work as "degenerate" was designed to condemn artworks and artists deemed responsible for cultural decline associated with liberal democracy (Peters & Lindberg, 2016). By contrast, after World War II, the US Central Intelligence Agency (CIA) engaged in a covert "cultural cold war" in a "battle for men's minds" (Stonor Saunders, 1999, p. 2). Stonor Saunders reveals how, via a front of cultural organisations, philanthropic foundations and a network of supportive influential individuals within cultural institutions (such as the Museum of Modern Art in New York), the CIA channelled money and influence to support their arts-based political agenda (Stonor Saunders, 1999). Art exhibitions, concerts, literature, media outlets and conferences across Europe were a significant component of America's anti-communist arsenal (Stonor Saunders, 1999). Art such as Abstract Expressionism, that purportedly epitomised values of freedom, was exported in major touring exhibitions. The intention and outcome was that intellectuals and academics of western Europe were nudged away from a "lingering fascination with Marxism and Communism towards a view more accommodating of 'the American way'" (Stonor Saunders, 1999, p. 1). The campaign, which operated through the anti-communist advocacy group the Congress for Cultural Freedom, ran for almost twenty years from 1950-1967 (Stonor Saunders, 1999). A less surreptitious version of CIA's form of soft power is the

concept of cultural diplomacy, in which an institution or government agency openly funds and develops international programmes with the explicit intention of exchanging ideas and fostering international relations, whilst simultaneously promoting certain cultural and political values (Grincheva, 2010; Zamorano, 2016). A reasonable claim to make is that any state-supported art initiative will inevitably be designed with the aim of supporting, not undermining, the state's agenda. In the Antarctic context this echoes the concerns Triscott and some participants raised, state-supported Antarctic art is not neutral.

6.4 Inculcating an Antarctic identity

To develop the ideas further, in this section I examine how art and culture reflect and support national interests associated with Antarctica in the home nation. I first consider the role of art and culture in the Antarctic gateway city construct, then explore examples of activity in art programmes from Chile and the UK. This allows a discussion of the operation of nationalism and geopolitical positioning through state-supported art and culture in Antarctica. Speaking in 1998 artist Jan Senbergs observed that "In all settlements throughout history...there's a need for a cultural identity. The Antarctic is at the stage where it needs a cultural definition" (Boyer, 1988). The question is, therefore, is an Antarctic identity comprised of multiple national identities or is there scope for the development of a shared identity based on shared values? The operation of nationalism, identity and culture is explored below, the potential for the development of a dimension of Antarctic culture based on shared environmental values is explored in Chapter 8.

6.4.1 Art and the Antarctic gateway city

As listed in Chapter 4, it is generally accepted that there are five international gateway cities that support international Antarctic operations including research, military-supported functions, and tourism (Roldan, 2011). Gateway status is of substantial political and economic benefit to the home nation. The gateway status is often publicly visible and manifest through the presence of Antarctic organisations; art, culture, heritage (including science) events, attractions and exhibitions; public art, often in the form of commemorative statues; place naming; and the preservation of structures with Antarctic heritage. A curator working in one of the cities acknowledged,

> *[The city] has really positioned itself, [and] is naturally positioned also, as being the gateway to Antarctica. And so [our institution] understands that role, and represents it through the collection and exhibitions. (IC29)*

As a form of place-making, the built environment (architecture, monuments, place names and signs) and cultural activity can create, communicate and reinforce the identity, or identities, of a place and its communities (Dovey, 2009). In this way, art and culture contribute to cultivating a sense of Antarctic identity and pride. The artefacts and artworks presented through museum and art exhibitions that recount historic and contemporary Antarctic narratives constitute a national cultural memory (UK Antarctic Heritage Trust [UKAHT], 2018). Such objects and imagery serve to remind nationals that they and their nation are connected to Antarctica through history and culture. The artworks resulting from NAP art programmes contribute to creating and sustaining a nation's Antarctic cultural identity. Furthermore, the existence of a NAP art programme itself reinforces the host nation's Antarctic connection and identity. As a form of cultural diplomacy, art and culture communicate a nation's Antarctic identity to visitors of other nations. Supporting an arts programme and displaying artworks in national research and cultural institutions signifies status:

> *Diplomatically, cultural heritage is considered to be very important [...] in terms of the nation portraying itself as an Antarctic nation of the first order. (IR10)*

This is true for all nations that support an Antarctic art programme, not only those in gateway cities. The UK is a case in point.

6.4.2 Identity and connection through heritage and art in Chile and the UK

Chile and the UK share a celebrated Antarctic historic connection. In 1916 Chilean Navy officer Piloto Pardo captained the vessel *Yelcho* that came to the rescue of Ernest Shackleton's men, stranded on Elephant Island in the South Shetlands for almost four months following the loss of the their ship *Endurance* during the ill-fated Imperial Trans-Antarctic Expedition. The story and the protagonists are embedded in both nations' cultural memories (Hurley & Rex, 2001). The historic and geopolitical connections between the UK and Chile make them an interesting case for discussion and comparison. I have chosen this focus primarily because the topic of Antarctic identity featured strongly in research interviews with participants from Chile. Further, as a UK citizen with experience working for an Antarctic heritage organisation I have more familiarity with British Antarctic heritage and culture than any other.

Chile and the UK, along with Argentina, each lay claim to the same region of the Antarctica Peninsula. Both Chile and Argentina consider themselves connected to the Antarctic Peninsula region geographically as well as culturally and politically. Official maps from each state includes the Antarctic Peninsula within their national boundary. In an effort to strengthen their Antarctic sovereign status, both Chile and Argentina have each established a village-like base in the Antarctic Peninsula region with facilities that support families (See Footnote 88, p. 81). Chile has stated its claim in the name of the country's southernmost county, the Region de Magallenes y Antarctica Chilena. Punta Arenas, the capital of the region, is one of the five gateway cities. International Antarctic logistics operate out of the city and Chile's NAP, Instituto Antarctico Chileno (INACH), is based there. Punta Arenas historic Antarctic connections are promoted through a heritage trail across the city (Chilean Antarctic Institute, 2013). Although this is not a comprehensive list, the naming of the region, the visibility of historic connections, and the conduct and facilitation of Antarctic activity are three of the ways the state of Chile sustains its connection and claim to Antarctica.

Within this cultural context, in 2010 Chile established *Project A*. This was a three-year artist-in-residence programme developed through a partnership between Chile's National Arts Council, INACH and the Chilean military (ICA48). As one of the interview participants explained, the governmental directive behind the project was to grow citizens' sense of emotional and cultural connection to Antarctica (ICA48). Moreover, the aim was to inculcate a local and national Antarctic identity through the creation and exhibition of artwork in the gateway city and in national museum settings (ICA48). Along with national maps, the birth of citizens in Antarctica, and a year-round national presence on the continent, *Project A* is one component of the nationalist project reflecting how the state and its citizens "see themselves as an Antarctic nation" (IO46). Salazar's research into Antarctic values reveals Chilean nationals, particularly those living in Punta Arenas, felt strongly that "Antarctica plays a strong role in shaping the Chilean identity" (Salazar, 2013b, p. 56).

In the second year of *Project A* artists living and working in Punta Arenas were selected to travel to Antarctica. Jeweller Marcela Alcaíno was one of those selected. The construction and wearing of jewellery is one of the oldest and most enduring forms of human visual and cultural communication (Montano, 2017; Verduci & Davis, 2015). Far from being merely beautifying adornments, the form,

content and display of jewellery is often deeply symbolic and packed with cultural signifiers (Adesanya, 2010; Montano, 2017; South Asian Association for Regional Cooperation, 2018).

In her work, Alcaíno draws inspiration from the natural world and the earliest cultures of Patagonia and the Tierra del Fuego Province, namely the Selk'nam/Ona and Aónikenk/Tehuelche peoples. Participating in *Project* A expanded her repertoire to include Antarctic references. Alcaíno's *Antarctic continent pendant with lapis lazuli*, pictured in Figure 28, is a piece of jewellery that epitomises the cultural and political intentions of *Project A*. An examination of the choice of materials and the imagery of the work reveals that this piece of jewellery is a symbol of Chile's national and geopolitical identity.

Figure 28. Marcela Alcaíno. *Antarctic continent pendant*, 2011. ©the artist. Reproduced with permission.

The pendant is comprised of an image of the Antarctic continent fashioned out of silver and suspended from the precious stone lapis lazuli. Silver is a metal with historic and economic significance for Chile. The silver rush of 1830-1850 contributed considerably to the country's economic wealth (Bader, 1974; Collier, 1977). Lapis lazuli is the Chilean national stone. Mined in the Coquimbo region since 1905, Chile is one of only two places in the world with a major high quality mineral deposit of this stone (Coenraads & Canut de Bon, 2000). Wearing a combination of the national stone and the image of Antarctica together is a symbol and expression of the idea that Antarctica is part of the cultural and national identity of Chile. In this way, the pendant can be understood as a manifestation of everyday nationalism reinforcing a sense of connection to Antarctica. Whichever customers might buy and wear this pendant, Chilean citizens or Antarctic tourists passing through Punta Arenas, the meaning is the same – a precious reminder of Chile's connection with Antarctica.

For the UK, the nation's Antarctic attachment to the continent are rooted in its historic expeditions, many of which have been led by the Royal Navy.[89]

[89] Key historic expeditions include: Captain James Cook 1772-1775, circumnavigation of the continent; Edward Bransfield 1820, landed in the South Shetlands and sighted the Antarctic Peninsula; James Clark Ross 1841, recorded sighting of the Victoria Land and entered the Ross Sea; Captain Robert Falcon Scott, 1901-04 and 1910-13, attempted South Pole expeditions.

The Royal Navy is now a major partner in the UK's current Antarctic artist residency programme. The other partners are the SPRI, the Friends of SPRI, and Bonhams auction house, the programme's major sponsor. SPRI cultivated the partnership and started the programme in 2010, the year after BAS withdrew their NAP art programme. SPRI is a research centre that is part of the Department of Geography at the University of Cambridge. The formation of the institute has roots in the heroic age of Antarctic exploration. Founded in 1920 as a memorial to Captain Robert Falcon Scott and the polar party that perished on their return from the South Pole in 1912,[90] the Institute supports the study of the Arctic and Antarctic regions. SPRI is home to The Polar Museum, an extensive polar library, and archival collections of artefacts including over 2500 original artworks and 80,000 photographs (SPRI, 2020c). The polar art collection, which contains the work of several key artists in British Antarctic history,[91] provides a visual record of British exploration and situates the UK in Antarctic human history. SPRI's collection is a reminder that Antarctic exploration is part of British national cultural heritage and identity. The heritage narrative is a critical dimension of the UK's claim to Antarctic territory and to the place of Antarctica in the UK's national identity (British Antarctic Territory Goverment, 2020b). The SPRI Antarctic artist residency programme consciously connects the present to the past. The first resident artist was Dafila Scott, the granddaughter of Captain Scott. Her interest was in following "in the wake of her grandfather...by travelling south on a naval vessel" (Bonhams, 2016, p. 9). Five years later the exhibition *Visions of the Great White South* presented artworks of the Antarctic artists alumni alongside notable historic artworks from SPRI's collection. The idea of continuing the British Antarctic heritage narrative is evident in the intentions of the residency programme and in the curation of resulting exhibitions. Curators of *Visions of the Great White South* constructed a narrative between contemporary artists' work and that of their forebears. The exhibition catalogue states that through the contemporary artists' work, "we can still trace a path back to the Heroic Age" (Bonhams, 2016, p. 5).

Furthermore, the continuation of the narrative is exercised through the institute's acquisitions policy. The artists SPRI supports are required to gift a piece of their work, thereby growing the collection of contemporary Antarctic artwork and adding to the national Antarctic cultural narrative (Bonhams, 2016). Connections between heritage and nationalism are significant, as Dodds and Yusoff explain in their postcolonial analysis of the operation of culture in the Antarctic context,

> *Heritage helps tell stories and constructs nationalist visions and narratives of a country and its population...Public exhibits of artwork play their part in preserving a record not only of the past but also in contributing to a contemporary political agenda. (Dodds & Yusoff, 2005, p. 149)*

In 2020, the UK Antarctic Heritage Trust (UKAHT) presented *Antarctica In Sight*, a public engagement programme of art and cultural activities to celebrate the 200th anniversary of the first sighting of the mainland of the Antarctic Peninsula by the British naval officer Edward Bransfield (UKAHT, 2020). Like the heritage trail in Punta Arenas, anniversaries and celebrations of Antarctic heritage are a form of remembering that serve to reiterate the nation's Antarctic connections and reinforce the nation's claim to territory.

The year-long *Antarctica In Sight* programme was due to include public talks, workshops, exhibitions and publications. Although several plans were hampered by the Covid-19 pandemic, one of the first

[90] Frank Debenham, the geologist on both of Captain Scott's Antarctic expeditions, founded SPRI. His aim was to create a place for researchers and resources to improve polar exploration and scientific investigation (SPRI, 2020b).

[91] Artists include: Wally Herbert, George Marsden, Herbert Ponting, Edward Seago, Keith Shackleton, David Smith and Edward A. Wilson.

projects completed was the publication of Peter Liversidge's *Proposals for Antarctica* (Liversidge, 2020). Known for his books of ideas for specific places and cities across the world, Liversidge, who has not visited Antarctica, compiled a list of potential artistic actions and artworks to be performed or made in Antarctica or the UK. Many of the artist's ideas relate specifically to Port Lockroy, the UK's first permanent base in Antarctica. The design and sale of postage stamps at Port Lockroy is one of his ideas (Liversidge, 2020, p. 6) and, as discussed in the next section, raising a flag is another.

Established in 1944, Port Lockroy operated as a year-round research station until 1962, after which it was left in a state of abandon until 1996, when the site was restored and designated a Historic Site and Monument (HSM) through the ATS (UKAHT, 2018). Port Lockroy was, and remains, an important physical structure and signifier of territorial sovereignty. Permanent occupation in the 1940s and 1950s was an attempt to establish a form of functional or effective occupation.[92] To this end, the team operated a post office from the base and circulated a currency in the form of postage stamps. Occupation and currency have been tactics used in attempts to declare sovereign territory rights (Waldock, 1948). Today the UK Antarctic Heritage Trust (UKAHT) manages the site as a living museum, a post office and a souvenir shop. Each summer a small team manages the site and welcomes international visitors. Coined as the most southerly public post office (British Antarctic Territory Goverment, 2020d), over 80,000 postcards pass through Port Lockroy each summer. Simultaneous to recognising the provisions of the Antarctic Treaty, the UK government's issue of stamps continues to reinforce their territorial claim. Similar to Chile's domestic legislation which defines Antarctica within national and county boundaries, the UK defines the British Antarctic Territory (BAT) as an overseas territory and has a legislative framework for is governance (BAT Government, 2020a, 2020b, 2020c; Government of the United Kingdom, n.d.). Postal administration is one of the many administration functions of the Government of BAT (BAT Government, 2020c). In his proposals, Liversidge engages with the UK's signifiers of territorial and cultural heritage, thereby connecting with political histories and continuing these narratives into the present.

6.5 Flags and the disruption of nation-state boundaries

The first of Liversidge's Antarctic proposals reads, "I propose to install a flag on the flag pole on the island of Port Lockroy. The flag in question will be white with a single word in the centre, it will read: HELLO" (Liversidge, 2020, p. 2). This is a striking opening to the book of proposals considering the act of flag planting is one of the major symbolic acts of claiming territory in Antarctica (Dodds, 2012). Flag waving is hot nationalism (Billig, 1995). A flag is a device through which a national consciousness is cultivated (Tuan, 1975). As an everyday signifier of nationhood, a national flag outside a public building may seem ordinary and go unnoticed within a home nation (Billig, 1995), but in Antarctica flags are conspicuous. Colliding national interests and contested sovereignties make flags stand out as the political statements that they are. National flags are widespread in places of human activity on the continent. Figure 29 shows that they appear on NAP clothing, on base buildings; tourists pose with them; and standing sentinel watching over the South Pole are the flags of the twelve original Antarctic Treaty signatory states.

[92] While effective occupation is a legal requirement of a sovereignty claim, its definition, through precedent in international law, has shifted over time away from physical possession of land at the exclusion of others to the requirement to show evidence of exercising the functions of a government over a territory (Huber, 1928).

Figure 29. Examples of national flags displayed in Antarctica. Clockwise from the top left: *New Zealand flag* – jacket, 2018/19. Photographer, Harry Seager. Antarctica New Zealand Pictorial Collection ©Harry Seager and Antarctica New Zealand. Reproduced with permission; Flags of Argentina, New Zealand, Chile, and Russia at the ceremonial South Pole, with sundog. Amundsen-Scott South Pole Station, Jan. 14, 2010. Author, Amble. Licensed under the Creative Commons Attribution-Share Alike 3.0 Unported license and the GNU Free Documentation License; Gabriel González Videla research station. ©Adele Jackson; and tour guides at Great Wall research station. ©Adele Jackson.

Liversidge proposes a white flag that carries a seemingly welcoming, benign and friendly greeting, yet the message is not neutral, as every flag is a symbolic hello. National flags are an announcement of a nation-state's power and dominion. This said, Liversidge's proposal is to replace the national flag that usually flies outside the Port Lockroy base, with one stripped of the colourful emblem of the nation. As a signifier of surrender, ceasefire and peace (Trapped in Suburbia, 2018), Liversidge's white flag can be read as a neutralisation of national allegiance or a truce between competing states. Conversely, the recently designed *True South* flag for Antarctica (Figure 30) seeks to avoid "passively maintaining neutrality" (Oceanwide Expeditions, 2020), its purpose is to build a "sense of community and connection with Antarctica" (True South, 2020b). Although there is no official Antarctic flag, there have been several proposals (R. Young, 2020). *True South* is the latest, created in Antarctica in 2018 by Evan Townsend (Oceanwide Expeditions, 2020) when he overwintered at McMurdo Station. The artist describes the design symbolism thus,

> *Horizontal stripes of navy and white represent the long days and nights at Antarctica's extreme latitude. In the center, a lone white peak erupts from a field of snow and ice, echoing those of the bergs, mountains, and pressure ridges that define the Antarctic horizon. The long shadow it casts forms the unmistakable shape of a compass arrow pointed south. Together, the two center shapes create a diamond, symbolizing the hope that Antarctica will continue to be a center of peace, discovery, and cooperation for generations to come. (True South, 2020a).*

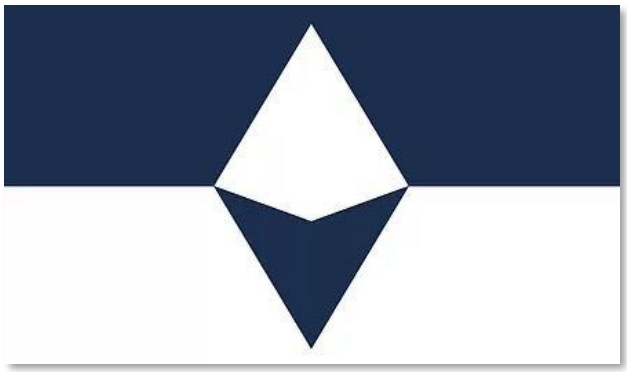


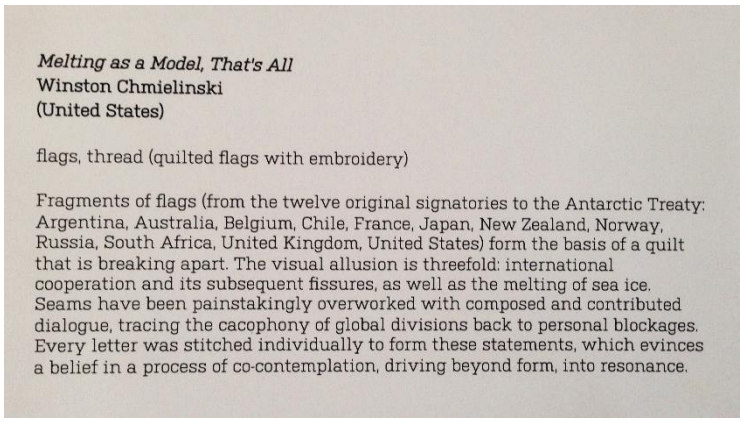
Figure 30. Evan Townsend. *True South* Antarctic flag, 2020. The design is publicly available for reproduction. Retrieved on 5 January, 2021 from https://www.truesouthflag.com/community

Figure 31. Winston Chmielinski. *Melting as A Model, That's All*, 2017. Photographed by Adele Jackson. ©the artist and photographer. Reproduced with permission.

For other artists it is the powerful symbolism of national flags that is used to interrogate and disrupt concepts of nationalism in Antarctica. Two examples are the work of Winston Chmielinski, and Lucy and Jorge Orta. Chmielinski's *Melting as A Model, That's All*, was commissioned for the exhibition *Antarctica,* presented at the *Antarctic Pavilion* 2017.[93] In this work, shown in Figure 31, the artist stitched together the national flags of the original twelve Treaty signatory states then cut away their

[93] The *Antarctic Pavilion* is an exhibition platform in Venice, Italy that operates concurrent to the Venice Biennales of art and architecture. Conceived as a transnational space, the Antarctic Pavilion represents a conceptual contrast to the national pavilion construct of the Venice Biennale events (Ponomarev, 2015). Artist Alexander Ponomarev founded the *Antarctic Pavilion* with curator Nadim Samman. Together they conceived the *Antarctic Biennale* project described in Chapter 3.

substance. Only borders were left intact. Although materially flimsy, these borders symbolically bound the remnants of the flags together. The artwork interpretation panel (Figure 32) explained that the work represented "fissures" in international cooperation in the face of the environmental impacts of melting ice. The seams, which are handstitched with dialogue, trace a "cacophony of global divisions". However fragile the delicate threads may appear, the concept of the nation-state and maintenance of conceptual, political and geographical borders holds strong in this work.



Melting as a Model, That's All
Winston Chmielinski
(United States)

flags, thread (quilted flags with embroidery)

Fragments of flags (from the twelve original signatories to the Antarctic Treaty: Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, Russia, South Africa, United Kingdom, United States) form the basis of a quilt that is breaking apart. The visual allusion is threefold: international cooperation and its subsequent fissures, as well as the melting of sea ice. Seams have been painstakingly overworked with composed and contributed dialogue, tracing the cacophony of global divisions back to personal blockages. Every letter was stitched individually to form these statements, which evinces a belief in a process of co-contemplation, driving beyond form, into resonance.

Figure 32. Interpretation label for Winston Chmielinski's *Melting as a Model, That's All*, 2017. Photographed in the exhibition with permission.

Figure 33. Lucy and Jorge Orta. *Antarctica Flag*, 2007. ©the artists. Reproduced with permission.

While Chmielinski erased the substance of the flags, leaving only the borders, in *Antarctica Flag* Lucy and Jorge Orta have done the opposite. Shown in Figure 33, the emblems of each flag are intact with the borders between them removed. The coloured symbols of nationalism merge into one complete image. Flown at major cultural events across the world,[94] *Antarctica Flag* was originally

[94] On their website the artists list 12 major events where the work has featured in France, Germany, Austria, Switzerland, London, Argentina, China and the USA (Orta & Orta, 2020).

commissioned and installed in Antarctica as part of the 2007 *End of the World Biennial.*[95] Conceptually, the Ortas imagine Antarctica as a potential utopia, in which the "extreme climate imposes mutual aid and solidarity, freedom of research, of sharing, and collaboration for the good of the planet" (Orta & Orta, 2007). Within this context Ortas' flag reads as a symbol of shared identity and unity.

Leane observes that Antarctica is a site of "intense national interest […whilst] simultaneously a uniquely international continent" (Leane, 2012, p. 17), which necessitates the need for textual analysis that considers both national and pan-national perspectives. With this in mind, it is noteworthy that the artists suggest that *Antarctica Flag* should become "the flag of the new world community, to be raised as a supranational emblem of human rights" (Orta & Orta, 2007). *Antarctica Flag* is one of a series of projects within Lucy and Jorge Orta's *Antarctica* series in which they promote cooperative values and geopolitical alternatives to nation-state division. In Chapter 8 I examine another of their Antarctic works, *Antarctic Village – No Borders*, in a discussion exploring environmental and planetary values.

6.6 Supranationality and international collaboration

For the Ortas, the term *supranational* is a recognition of the imperative for nation-states to work together in union, as world citizens, to make binding legal agreements for action that prioritise environmental and humanitarian needs above national advantage. Their decision to exhibit their Antarctic work to campaign alongside the COP21 2015 Paris Climate Conference is testament to their beliefs and their deployment of art as a vehicle for political activism (Orta, 2016). Supranational is also a term that the *Antarctic Biennale* and the *Antarctic Pavilion* adopted. However, their application and definition of the term is somewhat looser than the Ortas'. Rather than describing a legal or political entity, as in the strict definition of the word (Etzioni, 2001), the Biennale and Pavilion use the term to describe, "developing Antarctica's potential as a cultural space belonging to no specific nation - international voices, imagining the future of global community" (Antarctic Biennale, 2017a). Antarctica is conceptualised as a utopian space that transcends national boundaries.

Challenging the "sovereignty-obsessed" structure of the Venice Biennale, the founders of the *Antarctic Pavilion* have defined it as a "transnational sphere, out of line with the festival's politics of territorial representation" (Ponomarev, 2015). In a similar vein, through the *Antarctic Biennale*, Ponomarev set out to challenge the structure of nation-states and science programmes as the hegemonic order in contemporary Antarctica. He describes Antarctica as having been "colonized by competing national interests sublimated as cooperative scientific endeavour...it has been annexed in the name of a research elite" (Ponomarev, 2015). Rather than artists being granted access via national science programmes, the *Antarctic Biennale* sought to carve out a space of artistic and cultural inquiry independent of NAPs. Critical of science setting the interpretative agenda, the curators wanted to "pursue an expanded Antarctic imaginary" (Ponomarev, 2015). The project brought together over thirty artists, researchers, and thinkers from across the world. As outlined in Chapters 3 and 4, they travelled to Antarctica on board a chartered ship, which was the conceptual and logistical platform for the event. Those participating engaged in discussion and workshops while

[95] The *End of the World Biennial* was a large-scale international contemporary art event held in Ushuaia, Argentina. The first edition was held in 2007, some of the work included had been installed or created in Antarctica. In 2009 the second edition comprised separate event "chapters" in Rio de Janeiro, Buenos Aires, Ushuaia and Antarctica (Orta & Orta, 2009).

on board, then travelled ashore to install or perform their art. Although not the first biennale event in Antarctica,[96] it was the first project of its scale and one of very few international Antarctic art initiatives. It stands as the only Antarctic art programme that is intentionally trans-national and philosophically supranational as a direct provocation to nationalism and nation-state structures.

As discussed in Chapter 3, NAP art programmes have tended to be open only to national citizens and those with residency status. An exception was the former Argentinian NAP art programme, which was open to nationals of other countries. Reflecting the values of their art programme, in 2013, Argentina advocated for greater international cooperation and support for artists to work in Antarctica at the ATCM XXXVI. The ATCPs adopted Argentina's proposal as a resolution, which recommends that,

> *Parties be encouraged to promote the dissemination of knowledge about Antarctica through the development of art projects about Antarctica on the basis of international cooperation. (Resolution 5, 2013)*

However, two years later, following a change in management, Argentina withdrew their NAP art programme and erased the project details and artists alumni from the organisation's website (IOA32), thereby halting the advances of the previous administration. In 2019 the NSF restricted applications to US citizens. This was severely criticised by one of the interview participants who had worked for the organisation, describing the restriction as an "affront to the intellectual integrity of the NSF" (IO49). The AAD art programme is open to citizens from other original Treaty signatory states, but preference is given to Australian nationals. It is not surprising that NAPs favour their own citizens and residents, as domestic tax revenues are often the source of funds for state-supported programmes. Nevertheless, the lack of internationality in artist opportunity and selection serves to reinforce the boundaries of nation, and expressions of nationalism, in the Antarctic cultural space. This said, although national interest is palpable in much activity, the meta-principle of international cooperation inscribed in the Antarctic Treaty is a value that NAPs and researchers uphold in many other ways. The work of the Council of Managers of National Antarctic Programs (COMNAP) and the SCAR is testament to this.

Perhaps influenced by the existence of the Treaty and its meta-principles of cooperation and peace, some interview participants hold a perception of Antarctica as an internationally harmonious space (ICA48) "clean from any political issues" (IOC4). However, using the proliferation of individual nation-state research stations and the absence of an international Antarctic research station as an example, Hemmings highlights that national agendas and the commitment to maintaining the structures of the nation-state can prevent greater international collaboration (Hemmings, 2011). Although the nation-state structure presents obstacles, as one interviewee observed, "Antarctica teaches us that if we collaborate we can go further" (ICA48). If the nation-state obstacles can be overcome, there is tremendous scope for the development for arts-focused Antarctic international cooperation and collaboration. Although states have competing national interests, in a global climate context, states are environmentally interdependent. It is here where cooperation and shared values are being cultivated (Climate Action & UN Environment Programme, 2015). These concepts are expanded in Chapter 8.

[96] Its organisers labelled the *Antarctic Biennale* "The 1st Antarctic Biennale", however eight years earlier ITASC had claimed the title of first biennial event on the continent as participants in the "Antarctic chapter" of the *End of the World Biennial* in 2009 (Orta & Orta, 2009).

6.7 Concluding observations

This chapter has shown that human activity in Antarctica has a political basis, which is predominantly nationalistic in character and motivation. This national political context influences the emphasis of art programmes and can influence artists' work. In some cases this may restrict artists' freedom of critical inquiry. NAP art programmes and the selection of artists can reflect and serve geopolitical agendas. An example of this is how artists' work can contribute to cultivating cultural connections to Antarctica that support the development of a national Antarctic identity. This said, whilst narratives of national Antarctic heritage reinforce symbols of nationalism, territoriality and notions of sovereignty, artists can use these to question and advance alternative perspectives. Artists have reimagined the nation-state emphasis of Antarctica's geopolitical construction, and pushed political ideas beyond boundaried nation-state ideologies to offer inspiration for alternative geopolitical framings. The combination of the Antarctic Treaty's abeyance of territorial claims, and meta-principles of peace and cooperation, present a conceptual basis for the development of internationally open and transnationally collaborative art opportunities. While some projects have been developed on this basis in the past, at the current time no such programmes exist.

7 Art, science and ways of knowing Antarctica

The pursuit of knowledge and ways of knowing Antarctica are the focus of this chapter. Following on from the examination of geopolitics in the previous chapter, it is fitting that the centrality of science is the starting point for the discussion. The dominance of the natural and physical sciences in knowledge creation in Antarctica is tightly bound to national interest and Antarctic geopolitics (Herr & Hall, 1989). The continent for science construct that was borne out of geopolitical negotiation continues to be the legitimising device for national presence on the ice. This provides a basis from which to consider the relationships between art and science, and consider spaces for art-based inquiry beyond the science framework. The chapter explores how art can inform, expand and challenge our perceptions, adding to our understanding of and connections to Antarctica and the wider world.

7.1 Making space for art on a continent devoted to science

Science and exploration are inseparable in Antarctica's human history. Historic explorers mapped the existence of the continent, traced the Earth's magnetic field, documented and collected geological and biological specimens, and started the collection of longitudinal meteorological data (Boothe, 2011; Herr & Hall, 1989). In doing so, each contribution laid the foundations for the creation of a continent for science. Building on these foundations, the international scientific collaboration during the IGY of 1957/58 provided the pretext for the negotiations of the Antarctic Treaty (Elzinga, 1993). Consequently, science is the creation myth of contemporary Antarctica (Hemmings, 2010). Science is the justification for state-supported human presence on the continent. Indeed, voting rights within the ATS governance structures are granted only to those Treaty member states that demonstrate substantial scientific research (Elzinga, 1993; The Antarctic Treaty, 1959, Article IX.2). Correspondingly, several research participants acknowledged that natural science is or should be the primary reason for humans to be there.[97]

Out of the three foundational values of the Antarctic Treaty, science, peace, and cooperation (Hemmings, 2012), science was the most frequently discussed in the research interviews. Disputing the exclusionary dominance of science, one of the artists interviewed exclaimed that when the Treaty was written, "they forgot to put art in there" (IA33). This idea reflects Lynne Andrews' concluding remarks in her thesis *Antarctic Eye,*

> *An ideal Antarctic treaty would not only define the worthy principles and objectives of peace, science, international co-operation and the environment, it would also include the 'arts and humanities' in order to fully realise the rich potential of Antarctic culture. (Andrews, 2007, p. 238)*

Although art is not explicitly named in the Treaty, the consultative processes and structures of the ATCM have been used to forge an officially recognised space for artists. There are two ATCM resolutions that promote the contribution of artists. The first, adopted in 1996, notes that "Antarctica had been the subject of significant works of art" and recommends,

> *Promotion of understanding and appreciation of the values of Antarctica, in particular its scientific, aesthetic and wilderness values, through: a) Educational*

[97] IA3; IA16; IO23; IR31; IA33; IA39; IR42; IA44; SP17.

> *opportunities, in particular for young persons, and b) The contribution of writers, artists and musicians. (Resolution 2, 1996, p. 40)*

As stated in Chapter 1, Resolution 5 (2013), encourages international cooperation to support artists and art programmes. The resolution reads,

> *Convinced that international cooperation is one of the fundamental principles of the Antarctic Treaty system;*
>
> *Recognising the merit of promoting knowledge about Antarctica through art projects;*
>
> *Recalling Resolution 2 (1996), promoting scientific, aesthetic and wildlife values in Antarctica, through inspiration of young people and contributions by writers, artists and musicians;*
>
> *Recommend that:*
>
> *Parties be encouraged to promote the dissemination of knowledge about Antarctica through the development of art projects about Antarctica on the basis of international cooperation, to reflect, in particular, scientific activity and the importance of the preservation of the Antarctic environment. (Resolution 5, 2013, p. 305)*

Both of these resolutions are important landmarks as they strengthen the case for artists to work in Antarctica through formally recognising and advocating the contribution of the arts. A striking feature of both is their emphasis on promoting science and environmental values. As these resolutions indicate, science is the underlying context in the ATS for legitimising artists' presence in Antarctica. This marriage of art to science remains at the forefront of much contemporary activity. The most recent addition to the international collection of polar-focussed journals is *Antarktikos* (Kokmeijer, 2020a). Established by Dutch artist Esther Kokmeijer, the publication "provides a platform for a broad range of artistic and scientific perspectives that can reinforce one another" (Kokmeijer, 2020b). Connecting art with science is also reflected in the interview data. For several participants, the main purpose of artists working in Antarctica is to support science in some way.[98] An Antarctic art programme manager reported that only artists whose work focusses on science are selected for the programme she manages (IO24). In the words of another respondent who had worked in Antarctica briefly as a researcher, "[art] can be important, but science should definitely take priority" (SP24). In this science dominant context, science becomes a frame of reference to assess the value of artists and their work.

7.2 Syntheses of art and science

The mention of a synthesis between art and science appeared in over 25% of the research interviews.[99] Five of those respondents saw art and science as a complementary duality of binary opposites.[100] The development of this binary can be traced in the trajectory of Western philosophy. The period of the 17th century dubbed the *scientific revolution*, from which emerged the Age of

[98] IA6; IR15; I023; IO24; IR27; IA28; IR39; IA43; SP1; SP7; SP35; SP92; SP94.
[99] IOR1; IA3; IA5; IA6; IA12; IA13; IR15; IOR21; IO23; IA28; IR31; IA34; IR37; IA45.
[100] IA5; IA13; ICA14; IR15; SP41.

Enlightenment, saw a separation of philosophical disciplines and the elevation of some systems of thought and knowledge over others (Snow & Collini, 2012). In this period science came to mean the systematic study of the natural world through observation and experiment. New terminology transformed natural philosophers into *scientists* (Snow & Collini, 2012). The philosophical split created the division and dualism of "the two cultures" of art and science (Snow & Collini, 2012). However, there are problems with viewing the two realms of inquiry as a duality. One of the issues is in describing art as subjective and science as objective, as some participants did (ICA14; IR15; IA38; IR39). For these respondents, artists were considered to have the freedom to respond to their senses in a way that scientists are discouraged from doing (IR15). Artists were also described as engaging emotionally and imaginatively with the world, and as such, their art was a "personal response" and a form of "self-expression" (SP56; SP62; IOR21). Yet the binary positioning weakens the recognition of the intellectual rigour involved in art making and it disguises the fallibility of viewing science as an objective pursuit. The conduct of scientific inquiry is not an objective practice (Guba, 1990b). As humans we are limited in our perceptive capabilities, and we are subject to social, cultural and political influences which unavoidably shape our perceptions and conceptions of the world. Human conceptual understandings of the world are multiple and subject to change; there is no monolithic single truth. Bohm and Peat point out that there are further issues arising not only from the binary division, but from the divided structures of knowledge creation; the problem is not one of having distinct disciplines of inquiry per se, rather there is an issue of "a narrowness of vision" (Bohm & Peat, 2010, p. xviii). Fragmentation and disconnection within and between disciplines prevents a holistic understanding of the world (Bohm & Peat, 2010). This resonates with participants' views that describe the distinction between art and science as blurred (IA3; IA6; IOR21). A former art programme manager and scientist described art and science as "inseparable"; he considered art and science to be "a continuous activity" (IOR21). For another scientist there are times when,

> *You cannot find boundaries between them. The boundaries are absent or they are fluid, and what might be art at one point becomes science at another point and then it might go back to being art. (IR36)*

A common view was that, at their core, science and art are the same "human reflexes" (IA12); they share a similar intellectual curiosity and creative drive.[101] For these respondents artists and scientists were essentially involved in the same endeavour of focussed inquiry to reach a deeper understanding of the world. These ideas correspond with the shared philosophical heritage of art and science in Western knowledge systems; at one time the two were indivisible (Collini, 2012). Changes in conceptual engagements with the world brought about the division of art and science into separate realms of practice and inquiry (Bohm & Peat, 2010). Yet the philosophical concepts of *truth* and *beauty*, and the functioning of a creative and curious mind, are features in the work of many artists and scientists (Bohm & Nichol, 1998).

A third of all participants[102] expressed the opinion that art offers a "different way of seeing" to that of science. An artist who worked closely with a scientist in Antarctica explained,

[101] IA6; IA12; IOR21; IR31; SP35.

[102] EIP3; IA3; IR10; IOC11; IA12; ICA14; IR15; 1A16; IA19; IC20; IOR21; IO22; IO23; IO26; IA28; IC29; IO30; IR31; IA38; IR39; IR40; SP3; SP4; SP5; SP7; SP8; SP9; SP10; SP12; SP16; SP17; SP35; SP39; SP41; SP43; SP45; SP46; SP47; SP48; SP49; SP50; SP51; SP52; SP55; SP61; SP67; SP68; SP69; SP75; SP86; SP91; SP92.

> *We spent a lot of time together looking at things, and him explaining them from his perspective and me in raptures, drawing and recording. I was well aware that what he was seeing was very different from what I was seeing. (IA3)*

Consequently, some participants held the view that art contributes to our knowledge of Antarctica in ways that science alone cannot achieve.[103] As one artist put it, "science on its own is really missing a vital component of the contribution to knowledge and understanding of anything" (IA33). Together art and science "complete the scene" (IR37). This echoes the ideas that physicist and philosopher David Bohm advances, in which he advocates for multiple ways of describing the world. For Bohm,

> *[Every thought is] an abstraction, which does not and cannot cover the whole of reality. Different kinds of thought and different kinds of abstraction may together give a better reflection of reality. Each is limited in its own way, but together they extend our grasp of reality further than is possible with one way alone. (Bohm & Peat, 2010, p. xvii)*

Recognising the shortfalls of a single narrative, an artist who regularly collaborates with scientists observed that transdisciplinary practice (defined in Footnote 49, p. 53,) is "where we can create new knowledge" (IA28). Although cooperation and collaboration in other forms are greatly valued by artists and scientists, transdisciplinary practice involving artists is not a common practice within Antarctic research.

7.3 Working together: cooperation and collaboration

Within the research conversations discussion about the relationships between art and science extended into discussions of working relationships and exchanges between these realms of inquiry. Participants held in high regard cooperative practice between artists and other Antarctic researchers. A small number of respondents referred to cooperative and collaborative working relationships in general as founding principles of the Antarctic Treaty (IOC4; IA45; ICA48). As one programme manager stated, "Nowadays this cooperation is very important. Both artists and scientists are expanding horizons and leading humanity to new discoveries" (IOC4).

Those interviewed couched the value of cooperation and collaboration in terms of embracing different ways of seeing; combining knowledge; sharing skills; and enabling access to data and resources.[104] Importantly, the benefit of cooperation was not one sided, as scientists reported gains from their interactions with artists. There is significant research in the US that demonstrates the advantages of field station settings for fostering collaborations between natural, physical and social scientists, humanities scholars and artists (National Research Council [NRC], 2014b, p. 24). Such opportunities enable artists and scientists to "share viewpoints, observations, creativity, and perspectives in the common quest to observe and understand nature and biology" (NRC, 2014b, p. 26; University of Virginia, 2021). Scientists who had worked with, or alongside, artists pointed to the positive contribution of artists' perception and their observation abilities: artists were seen as being able to bring into clear sight things that would otherwise remain undetected and unquestioned.[105] One example given was that of an artist observing the behaviour of crustaceans, which "opened scientists' eyes to actually what was happening", leading to new and deepened understandings of

[103] IA3; IA6; IOC11; IC20; IOR21; IO26; IA33; IR37.
[104] IA3; IO8; IR10; IO23; IR27; IA38; IR39; SP39.
[105] IO23; IR27; IR31; IR37; IR39.

breeding behaviours (IR31). Equally, where artists chose to focus their attention, and how artists interpreted what they saw, had a significant influence. For one ecologist seeing the world through the artists' eyes was life changing:

> *[The artist's work] paid attention to the impact humans have in Antarctica...It's altered the direction of my career in that I now document the impact that humans have in the Antarctic. (IR31).*

Citing Frances Whiteread's *Embedded Artist Project* and listing the extensive range of skills and knowledge that artists bring to a project and an organisation,[106] one of the artists interviewed was a passionate advocate of artists being embedded within scientific teams and organisations. Similarly, some scientists embraced the inclusion of artists within their research teams and readily recounted their various skills and attributes (IR27; IR31; IR39; IR40). The list was long. In addition to their acute observation skills mentioned above, artists were valued for their creativity and visualisation skills, critical thinking and problem-solving abilities, and their practical and technical skills.[107] Commitment to tasks and concentration skills were also recognised (IA28; IA34; IR39 IA43) along with adaptability and interpersonal skills.[108] Examples of truly transdisciplinary projects where artists are equal members of an Antarctic research team are extremely rare. In Chapter 9 I discuss a recent example of an art and science transdisciplinary collaboration that had a strong education and public engagement dimension.

Those interviewed had experienced various configurations of cooperative working relationships. The examples provided below are a snapshot rather than a comprehensive representation of the possibilities for cooperation.[109] The configuration most commonly described was one in which an artist working in Antarctica via a NAP art programme would gather information and draw inspiration for their work from in depth conversations and interactions with the research and base community. It is understandable that the dominant scientific emphasis in Antarctic activity and in some Antarctic art programmes often attracts artists with an interest in science. Two artists interviewed considered themselves a hybrid combination of, or bridge between, art and science (IA28; IA43). In one example, an artist who was supported through the NSF art programme established a working relationship with a specific research team in advance of travelling south. He worked with this team in Antarctica to complete his art installation and the collaborative relationship continued long after the initial Antarctic project. In another example, an artist described being invited to accompany an aerial research event to collect her own aerial visual data. For her cooperation took the form of provision of access alone; there was no other arrangement beyond having a seat on the place.

Access is one of the critical support factors that scientists can provide. One of those interviewed described providing access through inviting artists to work within his team to support his fieldwork; this enabled the artists to use the experience to develop their work on their return home. For those

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[106] Whiteread's *Embedded Artist Project* aimed to develop recognition and utilisation of her skills and knowledge as an artist in addressing major issues social and environmental development through being embedded within local government regeneration and planning departments (Whiteread, 2015). She produced *What do Artists Know?* to articulate her (and other artists') skills and knowledge (Whiteread, 2006).

[107] IA12; IR27 IA28; IR39; IR40.

[108] IA12; IA19; IA34; IR39; IA43.

[109] There are also artists who work cooperatively and collaboratively with Antarctic scientists without visiting Antarctica themselves. Wayne Binitie worked with glaciologists from BAS to develop glass and sound installations (BAS, 2016). The work of astrophysicist Lifan Wang, forms the basis of the interactive and immersive installation of light and sound *INSTRUMENT: One Antarctic Night*. Using 758 million data points of 817,373 stars collected in Antarctica the virtual reality digital artwork transports the audience deep into the star field (xREZ Art+Science Lab, 2014).

artists who have worked within an Antarctic field team, their art practice was often secondary to their role within the team. A member of the public supported the idea of a dual role[110] in which artists would support science or base operations in addition to making art (EIP5). They saw it as being a way to maximise the benefit of human presence and to reconcile concerns about costs and resources. In the instances where scientists and artists specifically set out to work closely together, trust in an open-ended process was a key enabling factor (IA28; IA38; IR39). As one artist explained, "we had no idea how the experience would affect me and what I would create. So we approached it as...we'll be doing something, but we don't know what it is yet" (IA38). Similarly, another artist reported, "there were no exhibitions lined up, there was no expectation of specific outcomes, but we knew there would be something" (IA28). Speaking about the first time he worked with an artist in Antarctica, a scientist recounted, "she did a little bit of work while she was there. But [her work] exploded when she got back...it was the first example of 'no expectations' arrangement...it worked so well" (IR39). It is clear that although there are very few opportunities, artists and scientists have carved out a myriad of informal arrangements in order to support each other and collaborate.

7.4 Creating opportunities for collaboration

There was general recognition among participants that there are very few opportunities for artists to visit and work in Antarctica,[111] and opportunities to work within transdisciplinary teams are fewer still.[112] The artists and scientists I interviewed who are familiar with working in collaboration suggested that there is interest among scientists for the development of more transdisciplinary practice.[113] These participants voiced their hope for a change towards greater "joined-up-ness of the two approaches" (IR27). Although there is substantial scope for the development of combined art and science research, tremendous effort is required to foster such collaborations. Some foundational work is required to enable art and science transdisciplinary practice to become a new normal:

> *It needs a few other successful collaborations to be visible, to then sow the seeds that this is normal and this is successful...we need a couple of other actors to come along to cement the landscape. (IR27)*

As a starting point, "Art needs to be a designated place, not taking up a science place" (IA16). Furthermore, an understanding of the value of artists and their work needs to be grown amongst the Antarctic science, policy and funding communities through advocacy, media coverage, publishing and conference presentations (IR27; IR39; IO46). However, change takes time. Despite the fact that there may be receptiveness within Antarctic organisations towards combined art and science research, decision-making in funding and programme development is "a decade or so behind" (IR27). Whilst building opportunities for artists within organisational missions and associated funding programmes should be the aim, there was recognition that it can be difficult to make such changes (IR15; IOR21; IO49). Currently, funding programmes for Antarctic research do not have art built into what they do (IR27). Consequently, transdisciplinary research projects are often developed in an ad hoc manner. An alternative is for scientists to construct funding budgets within their research and

[110] The idea of a dual role echoes the approach within many historic expeditions where scientific, medical or navigational personnel with drawing and painting skills would also document the expedition. Edward A. Wilson is a well-known figure in this regard (Wilson & Wilson2011).
[111] IO23; IA25; IC29; IO30; IR31; IR36; IA41; IR42; IC50; SP56.
[112] IOR1; IA28; IA25; IC29; IO30; IR31; IR36; IA41; IR42; IC50; SP56.
[113] IA3; IR27; IA28; IR31; IA34.

funding proposals enabling transdisciplinary practice. One of the scientists interviewed who had worked in this way observed that the cost of an artist relative to the cost of the science programme is extremely low (IR27).

Examples of transdisciplinary team configurations that challenge current Antarctic research conventions may indicate the beginnings of a shift in practice where artists and scientists work much more collaboratively. Transdisciplinary collaborations are common outside of Antarctica,[114] but currently they are rare in Antarctic research. Three participants expressed frustration that NAP-supported artists were not appropriately involved or embedded within their host organisations (IO23; IA28; IR31). A scientist complained that artists appeared to be "parachuted in" (IO23), with little in-depth connection with the organisation or researchers working in Antarctica. Another scientist remarked, "They are not part of the process, they're observers" (IR31). While there is value in having observers who bring an independent criticality, there is also room for greater connection and closer collaboration.[115] Another scientist, who saw artists as critical actors within research endeavours, advocated embedding artists within the activities of science and logistics so that they become part of the programme. She envisaged that whenever scientists were going to do deep field work they would automatically take an artist with them (IR31). An artist argued that,

> *We absolutely have to provide a means whereby artists can communicate powerfully, with and alongside scientists...both undertaking important investigations and the work of each informing each other. (IA33)*

Rigorous art and science collaboration is an area of research practice that both scientists and artists value. Such collaborations are woefully underexplored and underexploited in Antarctica, which means there is considerable scope of development.

7.5 Seeking equality of art and science

Although for some participants pursuit or support of the natural and physical sciences were considered key criteria for granting artists access to Antarctica,[116] not all respondents held this view. There was substantial criticism of the dominance of science.[117] As one former Antarctic programme manager put it, "Antarctica offers us a lot more than just the science" (IO49). He went on to explain that,

> *[It is] troubling to think about the scientists having the upper-hand and being the superior group and artists coming along as sort of tag-a-longs, whereas throughout history and throughout the world the integrity of the visual arts and other arts and letters stands on its own. (IO49)*

Samman, curator and co-founder of the Antarctic Biennale, makes a similar observation stating that "what passes for Antarctic 'cultural' activity often assumes a subordinate role to the 'useful' research being carried out on bases" (Samman, 2017a, p. 1). Guy Guthridge, the former manager of the NSF art programme, suggests that science has tended to "crowd out other intellectual disciplines" (Guthridge, 2008, p. 6). Arguing in support of artists' presence in Antarctica, he quotes the National Foundation on the Arts and the Humanities which states that "An advanced civilisation

[114] See (Born & Barry, 2010; Chomaz, 2014; Gewin, 2021; Schnugg, 2019; Triscott, 2016; West, 2016).
[115] IR27; IA28; IA33; IA34; IO46.
[116] IO23; IO24; IR27; IA28.
[117] IR10; IOC11; ICA14; IR15; IOR21; IO26; IR31; IA33; IR37; IR42; IA43; IO46; IO49.

must not limit its efforts to science and technology alone, but must give full value and support to the other great branches of scholarly and cultural activity" (Guthridge, 2008, p. 7).

Two participants, both former managers of Antarctic art programmes, were critical of programmes that require artists to demonstrate a connection with science in their proposal (IOR21; IO49). These were deemed to "twist [artists] into doing something they might not have been motivated to do" simply to gain access (IO49). Three artists confirmed this situation, in their experience connecting with science is currently "the best way to get there" (IA28; IA34; IA43). In defiance of the dominance of science, the *Antarctic Biennale* was organised with the intention of challenging the status quo, announcing that,

> *We're not going to wait for scientists to decide which artists can go...We're laying claim to the artistic dimension and the artistic dialogue that we have with the place, and we're doing it on our own terms. (ICA14)*

The former art programme managers critical of the dominance of science argued strongly that art is valuable in its own right as a mode of intellectual inquiry and knowledge creation (IOR21; IO49):

> *Artists and writers are not publicists for the science programs. Their work is intellectually equal to them. The goal of the program should be to enable artists and writers to pursue their stated goals, unconstrained by any directive from anyone. (IO49)*

Leane points out that using art to promote science smacks of publicity for Antarctica as a continent for science, as opposed to enabling open exploration allowing a myriad of possibilities. She argues that "It allows little room for those who may want to interrogate, criticize or challenge existing Antarctic – or indeed aesthetic – values" (Leane, 2012, p. 8). Leane notes that our understandings of Antarctica would benefit from a greater cultural inquiry:

> *As the history of human engagement with the Antarctic region develops, it is becoming increasingly important to understand the specific meanings that humans attached to it – not only as a cold, icy, far-flung land, but as a place where important political, legal and environmental – as well as scientific – experiments are being performed. (Leane, 2012, p. 15)*

In comparison to scientists, artists were said to provide, "another dimension of reality" (IR37) and a broader perspective to that of scientific inquiry (IR40; SP41). Several respondents reported welcoming a different perspective to that of science, describing it as "refreshing" to have their thinking taken into different areas.[118] These perspectives align with the idea that having a new visitor with a critical inquiry remit is often a catalyst for seeing things in a new way:

> *[Their] contribution is the fresh perspective…The visitor is often able to perceive merits and defects in an environment that are no longer visible to the resident. (Tuan, 1974, p. 65)*

For some participants, an artist's ability to ask "penetrating questions" (IR31) is fundamental to their role (IR31; IA33; ICA48; IO49). Artists provide fresh perspectives through deconstructing or constructing ideas. "Interpreting" and "making sense" of the world were terms participants used to describe the activity that artists are engaged in.[119] One artist described his approach as a "stripping

[118] EIP3; IO8; IR10; IA12; IR15; IC20; IOR21; IO23; IO30; IR31; IR37 IR40.
[119] IO8; IA9; IOC11; IA12; IA16; IC20; IOR21; IC29; IR31; IR36; IR42; IO49; SP30; SP32; SP33; SP41; SP56.

back and rebuilding" new meanings (IA9). Although there is a question about the extent to which artists have critical freedom when hosted by a NAP or similar Antarctic art programme, at least two of the managers interviewed appeared to embrace some degree of criticality (IOC11; IO30):

> *Artists allow us to see Antarctica and our own programme through a different lens […they] come in and shine a slightly different light on it, or position it slightly differently, I think that's always valuable. (IO30)*

An artist observed that as a mode of investigation, art is "an important way to inquire what it is that we know and understand" and to inquire beyond what is known and understood (IA33). The same artist reported travelling south with, **"**a determination and an interest in my medium and the potential for its contribution to human knowledge and understanding" (IA33). To this end, there is a case for Antarctic art and science to be "put on the same platform ... showing art can be rigorous and research-based" (IA28). Artists' work was described as, "just as valid as scientific perspectives" (IR37), and as such should have, "an equal place at the table" (IR42). These points reaffirm Bohm's (2010) perspective, cited earlier, advocating multiple ways of describing the world. Recognising that art has validity in its own right, a scientist and former Antarctic art programme manager noted,

> *[I have] a rather more holistic view of the way in which we should see the Antarctic than some of my colleagues who were very much more constrained to the science boundaries in their thinking. My thinking, if anything, has got even broader. We should be aiming for people to see the world through a kaleidoscope ... it's the same world but viewed through lots of different viewpoints. (IOR21)*

In agreement, another programme manager regarded it as imperative to utilise different forms of knowledge. She explained that "it's absolutely crucial, fundamental, that we respond to [Antarctica] in multiple ways" (IOC11). An artist observed that we "absolutely need a cultural dimension in there to actually make sense of our being in [Antarctica]" (IA33). Art-based critical inquiry has value for making sense of and expanding human perceptions of and relationships with Antarctica.

7.6 Making sense of Antarctica through art-based inquiry

Images are critical in informing our understandings of Antarctica. Leane and McGee suggest,

> *The images that we make and stories that we tell about the past, present and future of Antarctica reveal as much about our relationship to the place, as do our behaviour, our international obligations and our domestic laws. (Leane & McGee, 2020, p. 6)*

Considering that all images and artworks are creations and that "every image embodies a way of seeing" (Berger, 1974, p. 9), the project of a critically inquiring artist looking at Antarctica is twofold: examining and deconstructing ideas whilst simultaneously constructing them. As one artist pointed out, "part of what art does as a critical project, is to see how [images are] an operating force in structuring our relationships to Antarctica" (IA33). In this section, I explore how artists engage critically with Antarctica and enable audiences to do the same through shifting perspectives, widening the frame of reference, and raising questions.

Part of the challenge of making sense of Antarctica is the transformation of "space" into "place" (Fox, 2005a, p. 192). Human beings reach an understanding of the world that we inhabit through a cognitive synthesis of physical and sensory experiences, thoughts and feelings (Tuan, 1974, 1977,

2012). Transforming space into place requires engagement of the body and mind to navigate space and build a perception of its materiality and mysteries. Some aspects of Antarctica are extremely challenging to comprehend let alone represent. In *Terra Antarctica* Fox charts the role images play in turning Antarctica into a knowable place (Fox, 2005b). He highlights the cognitive challenges of perceiving distance and scale, and the disorienting effects that shifting atmospheric, meteorological and light phenomena can have. In her series *Whiteout* (see Figure 34 for an example from the series), artist Anne Noble embraced the phenomena and metaphor of the whiteout blizzard. In these photographs of the near-featureless ice plateau, all sense of perspective disappears. *Whiteout* appears to perpetuate a now familiar trope of the disorienting emptiness of Antarctica's interior. Through engaging with disorientation, the series stands as a metaphor for struggling to find recognisable reference points and the process of seeking understanding in an attempt to transform this indeterminate space into place (Noble, 2011, p. 104).

Figure 34. Anne Noble. *Whiteout*, 2008. ©the artist. Reproduced with permission.

In contrast to Noble's monochrome space stand Erica Blumenfeld's studies of the colours on the ice plateau (shown in Figure 21, p. 72). Blumenfeld challenges the notion of Antarctica being a white continent, through depicting a spectrum of visible light frequencies. These images provide a much more nuanced perspective that stretches a viewer's understanding beyond a monochromatic stereotype. As Tuan notes,

> *[Art can] induce an awareness of place by holding up mirrors to our own experience; what had been felt can now be seen, what was formless and vacillating is now framed and still. (Tuan, 1975)*

By meticulously charting her visual observations, Blumenfeld has captured her experience as frozen moments of light, space and time. She enables others to glimpse an impression of what she witnessed and in doing so contributes to expanding their perceptions and understandings.

7.7 Drilling down into Antarctic ice

A prevailing image of Antarctica in the popular imagination is that of vast icy landscapes and seascapes. Over half of those who took part in the exhibition element of my research expected to see snow, ice, icebergs, and landscapes that are “beautiful, barren” (EIP1) “peaceful and contemplative” (EIP3). These responses are not surprising as ice is a defining feature of the Antarctic environment. Indeed, only 2% of the continent is ice-free (Brooks et al., 2019). It was Stephen Pyne, the first humanities scholar of the NSF art programme, who wrote that “Ice is the beginning of Antarctica and ice is its end” (Pyne, 1986, p. 1). Images proliferate in art, in the media and in commerce that capture the pleasing qualities of shape, pattern, light and colour of ice in its myriad of formations. In contemporary art, paintings and photographs of icebergs and icescapes have become something of a cliché, to which some discerning curators and artists have an aversion. As one artist put it, “I personally don't want to see another painting of an iceberg” (IA19). Representational art depicting classic icy scenes was criticised as “aesthetically pleasing but not very interesting”, “lacking depth” and “too illustrative” (IA19; IC29). Such work was perceived as “not stretching the viewer” (IOC11). Imported with Western expeditions since the early days of Antarctic exploration, realist icescapes painted en plein air have developed into something of an Antarctic tradition. Some Antarctic art programmes, or more accurately, members of their selection panels, have shown a preference for representational art (IR10; IOC11; IOR21), yet artists and cultural professionals advocate for greater criticality and conceptuality in the choice of artist. Such differences of opinion can cause tensions, as one programme manager reported,

> *I was glad we were able to push the committee to the point that we appointed [a conceptual artist]. But it probably won't happen again, because of the backlash, for a while at least. (IOC11)*

Beyond traditional landscape painting, there are other more conceptual artistic engagements that explore ice as a metaphor. Antarctic ice is an archive and an indicator of change; it is the pulsing heart of Earth’s circulatory systems, sustaining life, yet threatening to take it away.

Chris Drury, Anne Brodie and Anna McKee are three artists who engage with these metaphors in different ways and invite viewers to examine the *vital signs* of Antarctic ice — pulse, respiration and temperature. British artist Chris Drury travelled to Antarctica with the BAS art programme in 2006/07. On the voyage down he gave a presentation about his work and his interest in the concept of the planet as a living system. As a direct consequence a scientist on board showed Drury echogram images of ice depths, which he explained were similar to echocardiograms, but rather than depicting a human heartbeat, the echograms showed “the heartbeat of the Earth” (Drury, 2008). This sparked in Drury an idea that would become the artwork *Double Echo* (Figure 35). A fusion of nature and culture, art and science, *Double Echo* is a composite image of an echogram of Antarctic ice and an echocardiogram of the scientist’s heartbeat. The image layers a human pulse with a planetary pulse, reminding us these life systems are interconnected and interdependent.

Anne Brodie also travelled to Antarctica with BAS in the same season as Drury, which makes it understandable and interesting that in some of their work there is a thematic connection. Brodie’s *Breathing Berg* video is a fixed frame video recording the rhythmic rise and fall of a single iceberg (Brodie, 2012). Figure 36 shows two frames from the video. The tempo of the movement is slower than deep human breathing. Engaging with the work can have a contemplative effect of trying to slow one’s breathing to match the rhythm of the iceberg. The title and physical effect of the artwork metaphorically transform Antarctic ice into a living, breathing entity with which a viewer can attune their own body.

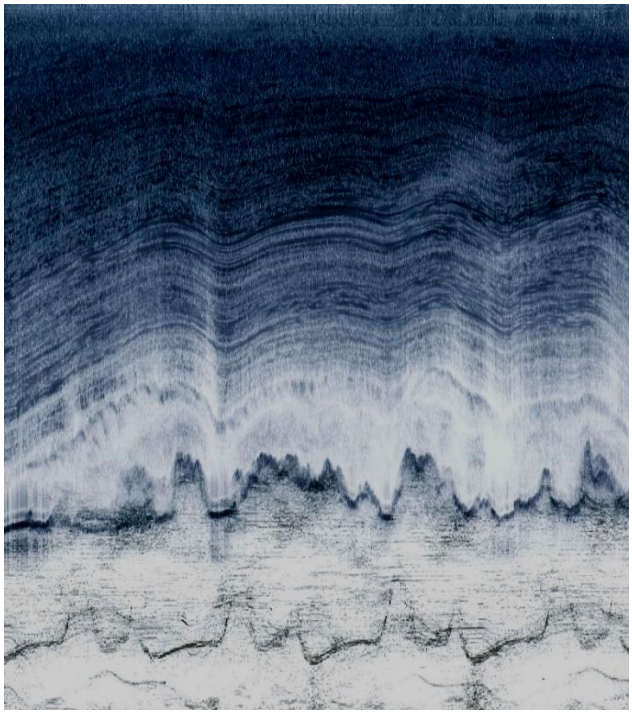

Figure 35. Chris Drury. *Double Echo*, 2007. From Flight W38. ©the artist. Reproduced with permission.

Figure 36. Anne Brodie. *Breathing Berg*, 2006-07. ©the artist. Reproduced with permission.

Figure 37. Anna McKee. *WAIS Reliquary 68,000 Years*, 2016. Left: exhibition installation at the Center for Art+Environment, Nevada Museum of Art. Right: detail of the glass vials containing melted samples from the WAIS Divide ice core. ©the artist. Reproduced with permission.

In 2009/10 Anna McKee, a recipient of the NSF art programme, visited the West Antarctic Ice Shelf (WAIS) Divide ice core drilling programme. The programme successfully drilled a 3405 metre-long ice core, which enabled paleoclimate scientists to chart a climate record close to 70,000 years (McKee, 2017). McKee's artwork *WAIS Reliquary 68,000 Years* (shown in Figure 37) comprises 3405 sealed glass ampules, containing 0.2ml of melted ice from each metre of the WAIS Divide ice core, sewn to 678 silk panels. Each panel represents 100 years of ice. The length, width and colour of each panel represents the temperature measurement and the number of meters of ice for each 100-year period. The artist describes the work as "a silent and abstracted representation of 68,000 years of temperature" (McKee, 2017). Read from right to left, past to present, the artwork charts the warming of Earth's climate. In the context of the science that indicates a continuing increase in temperature which has life threatening consequences (Hughes, 2000), the artwork represents a temperature check of the planet's health. Tuan suggests that "Metaphors enrich life, making it more vivid: they give us a feeling for objects and the world around us" (Tuan, 2012, p. 94). The three artworks metaphorically transform Antarctic ice into a physiological entity, anthropomorphising the ice and enabling viewers to contemplate the continent, and the planet as a whole, as a living being.

7.8 Seeing human presence in Antarctica

The problem with the ubiquitous images of spectacular scenery and charismatic wildlife that are "selling Antarctica, one incredible view at a time" (Glasberg, 2005, p. 13) is not their undeniable beauty, the issue is their lack of criticality. Pristine icescapes may appear free of human interference, yet the human is there in every image, behind the lens and just outside the field of view. Noble's *Wilhelmina Bay, Antarctica,* shown in Figure 38, widens the visual plane. In a "violation of expectations" (Leane, 2011a, p. 9) evidence of human presence intrudes into the pristine scene, thereby breaking the illusion and challenging perceptions of Antarctica as a pure, untouched landscape. The image is a reminder that humans are not disconnected observers of the world; we interconnect, and interact with the world. The artwork, which has been exhibited in national and international exhibitions, and published in several publications (Leane, 2011a; Matilsky, 2013; McIntyre et al., 2005; Noble, 2011) helps to "transcend perceptions of Antarctica as a sublime, untouched realm in order to grasp the realities of what is happening to the continent today" (Matilsky, 2013, p. 102). When artists such as Noble turn their attention to human presence in Antarctica, some of the most startling scenes that jolt complacency are captured.

Figure 38. Anne Noble. *Wilhelmina Bay, Antarctica*, 2005. ©the artist. Reproduced with permission.

Figure 39. Geoffrey Ricardo. *Focus Points*, 2009. ©the artist. Reproduced with permission.

Geoffrey Ricardo travelled to Antarctica as artist in residence on a tourist vessel via the Theme Media art programme. His work *Focus Points*, shown in Figure 39, humorously captures the intensity of tourists' enthusiasm for taking photographs. In the scramble to take their photographs, one of the passengers is about to fall overboard. Although the work is a tongue-in-cheek representation, it reflects an element of truth. During tourist cruises, tender boats filled with passengers are driven around in search of spectacular ice and charismatic wildlife. As viewers we cannot see what has captured the attention of the photographers in Ricardo's print, but this does not matter because we have the image that they are all trying to photograph numerous times before. Visitors arrive in Antarctica eager to capture the scenes that the brochures and documentaries have promised. Artist Anne Noble observes,

> *The Antarctica of our dreams is a visual domain cast in a pattern already set – as a picturesque wilderness...Photography confirms a 'having been there' that is desirable, touchable, and ultimately purchasable. It becomes the pre-text for travel and loads a geographic imaginary that renders the traveller blind. (Noble, 2011, p. 126)*

Ricardo's focus point is different to that of the tourist. His interest is not the vista that has been captured a thousand times before; he turns the lens around to record the performance of tourism itself. In a similar way, Jan Senbergs' attention was drawn towards a human subject:

> *Architecture and all its details – interiors, rubbish, things left around – can identify a kind of society, a type of place, and the events that have taken place there...it's the way I transcribe comment about society. (Boyer, 1988, p. 30)*

Senbergs travelled to Antarctica in 1986/87 before the signing and ratification of the Madrid Protocol. The timing is pertinent to note because the Protocol required NAPs to clean up waste materials from their stations and abandoned sites. Up until this point waste had been allowed to accumulate. During his voyage Senbergs focussed his gaze squarely upon the traces of human presence. Several of his paintings feature the detritus of human presence. Figure 40 *Heard Island (Admiralty Hut),* shows elephant seals hauled out in and amongst the debris. As noted earlier in this chapter and in Jackson (Jackson, 2019), the shock of seeing Senberg's work influenced one scientist

to change her research focus towards ecological understanding of human impact. Along with Ricardo and Noble, Senbergs shows us a reflection of our Antarctic selves that disrupts preconceptions and invites us to confront who we are in Antarctica. Do we like who we see in the mirror?

Figure 40. Jan Senbergs. *Heard Island (Admiralty Hut)*, 1987. Image courtesy of the artist and Niagara Galleries, Melbourne. Tasmanian Museum and Art Gallery collection. Purchased with funds provided by the ANZ Bank Bicentennial Art Commission, 1987. ©the artist. Reproduced with permission.

7.9 Recording and representing human thoughts, feelings and responses

Some of those interviewed noted that human experience was an important aspect of Antarctic knowledge that has been left largely unexamined due to the emphasis on natural science as the primary research focus (IOC11; IA12; IA19; IO22):

> *Everyone's there for quantifiable data, which doesn't leave much space for the bit of us that is the human being engaging with an extreme part of the world and how it makes us feel. (IA19)*

Acknowledging this gap, one participant suggested that, in part, the role of an artist in Antarctica is to "express that which doesn't get expressed" (IO22). A manager of an Antarctic art programme stated she was eager to receive proposals for art projects with an "ethnographic focus", but during her tenure she had not received any proposals of this nature (IOC11).

Although Anne Brodie did not set out with an intention to document the tenor of human experience, it became evident to her during her visit that the experience of community was a significant part of life in Antarctica and on base. Brodie had taken a supply of glass jars with her to create a sculptural journal of collected objects that documented her experiences, but her observation of the centrality of community prompted her to repurpose the jars. Instead of her own journal, she invited base personnel to each fill a jar with something that represented their identity, and feelings about Antarctica (Wells, 2012). The result (shown in Figure 41) is a co-authored artwork representing each contributor and the community as a whole. The jar contents included blood, urine, a dental drill bit, birthday candles, skidoo chain and, as discussed in Chapter 5, pornography. Open to interpretation, the artwork prompts questions about the meaning and significance of the contents as well as the state of mind of the contributors. This collaborative work captures both a representation of the individuals and the community.

Figure 41. Anne Brodie. *Antarctica, a choice? Rothera Collection*, 2007. ©the artist. Reproduced with permission.

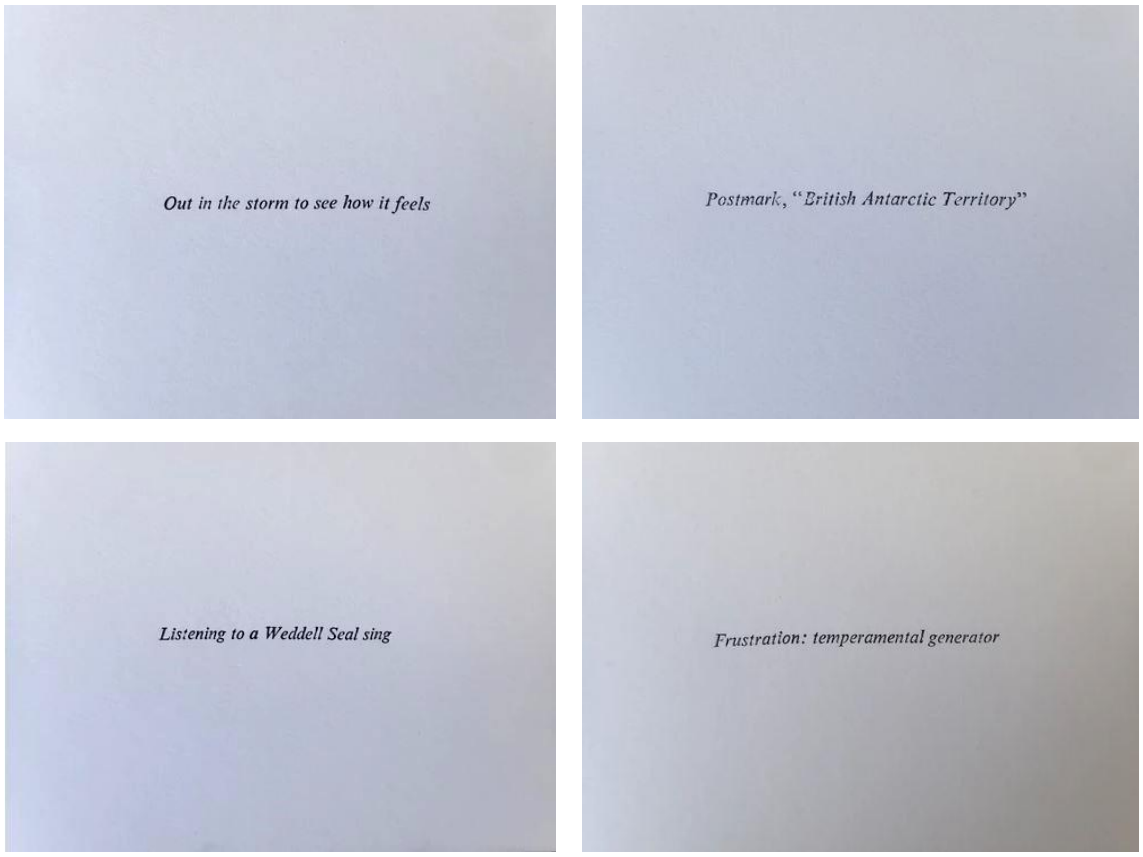

Figure 42. Adele Jackson. *Island Days*, 2016-17. Clockwise from top left: Out in the storm to see how it feels; Postmark, "British Antarctic Territory"; Frustration: temperamental generator; Listening to a Weddell Seal sing. ©the artist.

Island Days is one of my own artworks, created in 2016/17 whilst working at Base A, Goudier Island, Port Lockroy in the Antarctic Peninsula region. As explained in Chapter 6, Port Lockroy is a former

British research station now preserved as a historic site and famed for its museum and post office. *Island Days* is a collection of 109 white postcards, one per day living on the island. Each card is hand-printed with a short statement capturing a moment from the day. Figure 42 shows a selection of the cards. As a distillation of observations and experiences, the artwork is a type of journal. Its form also references Antarctic heritage and culture. The postcard alludes to the post office function of the site. Similarly, the word-restrictions imposed upon weekly telegram communications when the base was operational in the 1950s inspired the brevity of the text used on each postcard. Referencing the environment, the white postcard conforms to the white continent trope, and the inked words are imprints of my presence in the Antarctic landscape. The work is a document of the cultural and natural environment of a small Antarctic island (Jackson, 2018b). Read in sequence the work is a poem-like representation of time, place, experience and perception.

Also using a postcard format, artist Guy Frederick travelled with Antarctica New Zealand to Scott Base in 2017 and asked personnel there to write "postcards to Antarctica" (Fredrick, 2017). Calling forth emotional responses, he asked people to describe what the continent meant to them. The collection of postcards was exhibited at Canterbury Museum later the same year. The reverential tone of the postcards speaks to the environmental values held by the participants. Each read as a short poignant story:

> *Dear Antarctica,*
>
> *You have opened my eyes to your serenity.*
>
> *You have cleared my lungs with your crisp cold winds.*
>
> *You have spoken your secrets within my humble ear.*
>
> *You have opened my mind to a realisation of what we have, and what we have to lose.*
>
> *From Ruby. (Fredrick, 2017)*

Brodie's, Frederick's and my own artwork, each tell a story based on human experiences and connections to Antarctica. The idea of artists being storytellers is one that several research participants suggested.[120] Once again Tuan offers a helpful observation when he says, "the stories we tell about places often say as much about who we are, as about where our feet are planted." (Gabriel, 2013). Stories and images about Antarctica contribute to constructing our ideas of place and cultural identities, and they can establish and reinforce beliefs. As I have discussed in the two previous chapters, art can reveal underlying power structures and values. For this reason, a critical understanding of Antarctic identities is vital as humans develop "cultures of belonging to Antarctica" (IA33). Artists required for this task are those who can critically look at the identities and cultures people are constructing for themselves and the community in Antarctica.

7.10 Breadth of inquiry

Observations among some interview participants were that there is not enough diversity of practice in Antarctic art and that a wide range of subject matter and artforms is important.[121] However, a

[120] ESP1; IC4; IA9; IO26; IA28; IO30; IR31; IA38; IA41; IA44; SP9; SP19.
[121] IOC11; IC17; IC18; OR21; IC29; IR31; IR42; IA45; IO49.

broad-brush analysis of artists' work demonstrates that artists have engaged in a breadth of subject matter. The summary I provide in Appendix 4 shows the range of topics and perspectives through which artists have interpreted and critically engaged with Antarctica. The diversity of subject matter corresponds with Glasberg's analysis that,

> *Antarctica's visual history cannot be seen as logical progression of increasing fact and accuracy towards a fully formed knowledge but rather disparate accumulating constructed and curated collections. (Glasberg, 2005, p. 10)*

While at a glance it appears that artists are exploring a wealth of topics, this belies the fact that very few artists have worked in Antarctica. The amount and extent of arts-based critical inquiry is minute in comparison to other modes of research. Furthermore, some artforms and topics are over-represented. Out of a total count of 344 artists between the years 1955/56 and 2019/20, 30% of all artists were painters, 20% were photographers (not including photojournalists, wildlife photographers) with landscape as a subject matter dominating the field.

Samman has described Antarctica as "underexploited...as a field of visual and conceptual enquiry" (Samman, 2017b), indicating the potential for greater critical cultural engagement with the continent. Both the *Antarctic Biennale* and the Argentinian NAP art programme increased the number of contemporary conceptual artists, but there is still extremely low representation of some artforms. Contemporary ceramics, glass, textile and jewellery are poorly represented. The combined total of artists working in these four mediums over the 64-year period is 10 artists, equating to less than 3%. Two respondents remarked that there are likely to be many art techniques and schools of thought that have not been applied to Antarctica simply because so little artistic practice has taken place there (IA9; IOR21).

7.11 Concluding observations

In Antarctic research it is common for artists to engage with the world of Antarctic science. Artists and their work can make valuable contributions to scientific and transdisciplinary inquiry. However, the data shows that art in its own right contributes significantly to our knowledge and understanding of Antarctica. Moreover, multiple forms of knowledge are vital but, in spite of recognition of these points, a consequence of the extremely low number of artists currently being supported to work in Antarctica is that barely any new art-based research is being developed. Furthermore, whilst images of Antarctic icescapes proliferate, there is far less critical inquiry. Yet it is through artists' analytical inquiries that our critical understandings of Antarctica develop. Such artworks allow our understandings to stretch beyond a surface appreciation to find deeper meanings and raise important questions. Whilst confronting images and ideas may disrupt, such disruption can counter complacency. Antarctic art contributes to cultural and political discourse, providing a legacy that informs and extends our understandings of Antarctica. The next chapter develops these ideas further through the examination of the environmental dimensions of Antarctic art.

8 Exceptional Antarctica within an interconnected world

This chapter has two distinct yet interconnected environmentally-focussed themes. The first explores human impact on the local Antarctic environment. Here a conflict arises between human presence and the impact of presence, which prompts questions about the necessity and reasons for artists, or anyone else, to visit and work in Antarctica. The second theme, which is one that concerns many contemporary artists, is the effect of human-induced climate change on Antarctica and the associated consequences for the rest of the planet. The discussion highlights some of the issues of anthropocentric environmental values and behaviours, suggesting that a shift toward ecocentric values, policy and action is required to address the challenges that the planet's environmental systems and humanity are facing.

8.1 Exceptional Antarctica

The ideas of exceptionalism that contributed to the formulation of the ATS governance and which described Antarctica as a region distinct from the rest of the planet geographically, environmentally and politically, have proved to be unstable (Hemmings, 2009; Leane & McGee, 2020). The geographical and physical obstacles that made it difficult to reach Antarctica and sustained a notion of separateness have been largely overcome. Consequently, human access to and activity in the Southern Ocean and on the continent have increased. Political exceptionalism and the idea that Antarctic governance and potential access to the continent's natural resources resided with a limited number of states (primarily the original Treaty signatory states) was overturned several decades ago.[122] While there are endemic species and ecosystems that are specific to Antarctica, environmentally Antarctica is indivisible from the interconnected and interdependent global atmospheric, cryospheric, hydrospheric and biospheric[123] systems. Although the geographic, environmental and political concepts of exceptionalism have faltered, scholars point to the need to maintain some notion of exceptionalism in order to develop legal instruments to strengthen environmental protection (Hemmings, 2009). Their concerns centre on protecting the continent and the marine ecosystems against an escalation of human activity and impact. Research participants shared similar concerns. As the discussion below shows, the idea of preserving and protecting the Antarctic environment featured strongly in the data.

8.2 Footprints on the snow

In his journal of Antarctic sketches and poetry, artist John Kelly writes, "Much that is Antarctic concerns 'footprints'...the mark of being there and the gesture of a fleeting contact" (Kelly, 2004, p. 26). Leane reminds us that footprints in Antarctica are "signs only of humanity's interference" (Leane, 2012, p. 1). Footprints are our trodden paths, our vehicle tracks, our landing strips and anchor points. They are the square metre area that our research facilities occupy and the waste that humans deposit (Brooks et al., 2019, p. 185). They are the sum total of carbon emissions from seasonal air, ship and land transport operations. Through sealing, whaling, exploration, science, fishing and tourism, our early Antarctic history through to present-day activities leave indelible imprints on Antarctic terrestrial and marine ecologies. Furthermore, the footprints of industry,

[122] In the early 1980s, led by Malaysia, states outside of the Antarctic Treaty signatory status raised "the question of Antarctica" within the United Nations' forum, challenging the exclusivity of Antarctic governance and the Consultative Parties' assumptions around access to mineral resources (Hayashi, 1986).
[123] I include humans in the biospheric system.

agriculture and everyday life thousands of miles away leave their trace in Antarctica. One of the scientists interviewed emphasised that,

> *[Antarctica is] no longer an isolated place, with POPs (Persistent Organic Pollutants) flying around the world...the truth is not stacking up to the myth. It is still the biggest wilderness on the planet, but it's not untouched. The word 'pristine' is tossed around inaccurately. (IR31)*

Considering the wealth of Antarctic experience among those who participated in the research, it was surprising to find that, in the minds of a few, the myth persisted that Antarctica is "pure" and "pristine".[124] Even so, all those who spoke about the Antarctic environment, either as clean or as tainted, shared one thing in common, they all advocated environmental protection values that support preventing an escalation of human impact on the continent and in the wider world.[125]

Concern about human environmental impacts were repeating themes in the interviews, especially among the exhibition visit participants. Respondents were interested in the artworks exploring human presence yet concerned about the environmental impact that the images depicted.[126] The human activity around base and field stations was described as "ugly", "messy", "insensitive" and "stains" (EIP2; EIP3; EIP4). Such concerns led one participant to question the efficacy of Antarctic environmental monitoring and protection regimes; she suggested that policies and protections needed to be "tightened up" (EIP4). Whilst this opinion was based on visual appearance alone, rather than a detailed knowledge of how the Antarctic environmental protection regime functions, it raises an interesting question about how the public perceive evidence of human activity in Antarctica. Three interview participants acknowledged the ATS for its role in protecting the environment (IA16; IR36; IO49). They considered adherence to environmental protocols as fundamental to all human activity, including art, in Antarctica. Two respondents saw de facto managers, such as IAATO which manages tourism, as helping to guard against transgressions (ICA14; IA44).

The exhibition also prompted self-reflection in some audience members, who expressed awareness of and concern about the environmental impact of some of their own behaviours. The feeling was one of conflict, a clash between a desire to visit places around the world with feelings of guilt about the impact of air and ship travel (EIP3; EIP4). Similarly, artists aware of the same contradictions questioned the value of travelling to Antarctica in relation to the objectives of their work[127]:

> *It's a dilemma. I think all of us [working in Antarctica] are in conflict. We're terribly conflicted about it...[but] I feel I'm making enough impact through education and the projects I'm doing to justify that carbon footprint. (IA44)*

An artist and participant in the *Antarctic Biennale* reflected on the environmental impact of the initiative, and whilst he reconciled his concerns, an anxiety about increasing visitor numbers remained:

> *I worried about [whether an] increase of artistic expeditions like ours...will damage the environment of Antarctica. We were careful enough about it during our*

[124] IOC4; IA25; IO26; IOA32; ICA48; SP17.
[125] IOC4; IA7; ICA14; IR15; IO26; IA34; IR36; IR42 IA44; IA45; IC50; IA51; SP9.
[126] EIP2; EIP4; ESP1; ESP3; ESP4.
[127] IA6; IA7; ICA14; IA34; IA44.

> *expedition. But [a] dramatic increase of visitors will make following the rules more difficult. (IA7)*

Another participant had difficulty reconciling perceived environmental cost with their perception of what artists offer. His view was that,

> *In some cases [artists] share an inspiring and thought-provoking story, but in other cases I think it's not worth the huge environmental impact of sending people down there to produce for a niche, narrow, elitist and often privileged audience. (SP9)*

While this generalised and biased portrayal of an art audience can be challenged,[128] the view expressed above raises some important questions not only about artists' presence in Antarctica, but about human presence more generally. What are the impacts and advantages of any type of human activity in Antarctica; and what value does this activity have for the wider world? Research into the environmental impacts of human presence show that the types of impact are broad-ranging with each having significant environmental consequences (Brooks et al., 2019; Tin et al., 2009; Tin, Liggett, Maher, & Lamers, 2013). These impacts can be understood as types of footprints, of which there are several types[129]:

- Carbon emissions (Brooks et al., 2018; Pertierra, Hughes, Benayas, Justel, & Quesada, 2013);
- spills and contamination (Klein, Sweet, Wade, Sericano, & Kennicutt, 2012; Tin et al., 2009);
- waste and sewerage disposal (Tin et al., 2009);
- trampling (Ayres et al., 2008; Tejedo et al., 2009);
- sea bed anchor scour (Broad, Rees, & Davis, 2020);
- non-native species introduction via ship hulls, food stuffs and clothing (Hughes et al., 2011; Molina-Montenegro et al., 2014; Tin et al., 2009); and
- the construction of bases, runways and wharfs (Brooks et al., 2019).

The highest number of annual visitors can be attributed to tourism, with a record high of almost 75,000 visitors in the 2019/20 season (IAATO, 2020a), with some popular landing sites receiving in the region of 20,000 onshore visitors (Hogg et al., 2020). However, it is the scientific programmes, and the logistics that enable the science, that spatially have the most wide-reaching footprint on the continent (Brooks et al., 2018). The justification for this activity is the pursuit of data and knowledge of the earth's systems and the planet's environmental history in order to model potential environmental futures (Kennicutt et al., 2014). Informed by the SCAR and Southern Ocean Science Horizon Scan of 2014 (SCAR, 2014) the road map for Antarctic research states,

> *The Earth System and how it has and will respond to anthropogenic stressors cannot be fully understood or predicted without understanding the Polar Regions and their teleconnections to lower latitudes. Our understanding of change in the Antarctic region, and why it is happening, is important to informing the global*

[128] Although studies have shown that within many societies there are different rates of gallery and museum attendance between people depending on their socio-economic circumstances and educational achievement (DiMaggio, 1996), this is an imperfect indicator for defining who accesses and participates in art (Hanquinet, 2013). The inclusivity of cultural democracy, which has shaped arts policy in many states over recent decades, recognises and enables people's cultural participation (as makers and audiences of art) irrespective of socio-cultural, economic, demographic or educational attributes (Hadley & Belfiore, 2018). As a 2019 evaluation report of Australian arts participation found, "98% of Australians engage with the arts in some way […] arts are not a luxury; they are embedded in the very fabric of our lives" (Australia Council for the Arts, 2020, p. 10).

[129] Brooks et al. suggest 11 distinct footprint types: disturbance, building, contamination, non-native species, noise, visual, visitation, risk, carbon, ecological, and human (Brooks, Jabour, & Bergstrom, 2018).

> *debate about the trajectory of our planet's environment and how decisions by humans can effect and alter future outcomes. (Kennicutt et al., 2016, p. 11)*

Recognising that "maximizing scientific return while minimizing the human footprint should be the goal" (Kennicutt et al., 2014, p. 25), the development and utilisation of remote sensing in some fields of research has significantly improved data collection and has reduced the need to visit the continent (Kennicutt et al., 2016; LaRue et al., 2020), but in many cases ground data remains necessary for verification purposes (Gray et al., 2020; Newall et al., 2020).

It can be argued that, in terms of artists' presence, the planes and ships enabling science and tourism will fly and sail to the same capacity irrespective of whether artists are on board. Therefore, the environmental advantages of artists' absence are minimal. Having said this, there is undoubtedly a contradiction between artists creating art that seeks to raise awareness of climate change whilst simultaneously taking long-haul flights to create this work; there is a case to be made for people to live by the values that they profess to hold. Yet when artists are absent from Antarctica there is something significant that is lost. As discussed in Chapter 1, art and the humanities are fields of practice that examine and contribute the constructions of meaning, culture and values. Artists bring a critical eye, a questioning mind and an ability to translate thoughts into a form which invites others to look, think and question. The discussion in Chapter 7 highlighted the need for both scientific and artistic inquiry in order to examine and understand the world.

8.3 Marking the landscape

There is tension between footprints in Antarctica and protecting Antarctic aesthetic and wilderness values. The concepts of wilderness and aesthetic values were introduced into the ATS through the Madrid Protocol. Article 3.1 states that,

> *The protection of the Antarctic environment and dependent and associated ecosystems and the intrinsic value of Antarctica, including its wilderness and aesthetic values and its value as an area for the conduct of scientific research, in particular research essential to understanding the global environment, shall be fundamental considerations in the planning and conduct of all activities in the Antarctic Treaty area. (Protocol on Environmental Protection to The Antarctic Treaty, 1991)*

Although the Protocol does not explicitly define what wilderness and aesthetic values are, there are connections to ideas that have grown out of Western philosophical and environmental thought. Wilderness is widely used to describe a large natural area undisturbed by human infrastructure (Summerson, 2013; United States of America Congress, 1964). Defining aesthetic value is a much more complex area of philosophical debate (Levinson, 2003). However, in the natural environmental context of the Protocol, a starting point for a definition is the perception of what constitutes beauty in nature. Summerson's survey-based research exploring perceptions of wilderness and aesthetic values confirms that landscapes with no evidence of human presence or infrastructure have significantly stronger aesthetic and wilderness value than those that include human presence and infrastructure (Summerson, 2013). Despite being written into the ATS, there have been few examples of these values being officially protected. Hemmings (2009) and Summerson (2013) both reported that aesthetic and wilderness values have been rarely used to designate Antarctic Specially Protected Areas (ASPAs).

Promoting wilderness and aesthetic values has provided a rationale for NAPs to support artists and develop art programmes, this is explicit in the phrasing of the two ATCM resolutions (Resolution 2, 1996; Resolution 5, 2013) that encourage support for artists, quoted in Chapter 7, pp. 94-95. It follows that NAPs often select artists on the basis of promoting and upholding these values. Furthermore, an aversion to evidence of human interference is reflected in attitudes towards art practices in Antarctica. One artist interviewed reported experiencing strong resistance to her ideas for an ephemeral sculpted ice and snow installation. She reported that the decision makers in the Antarctic organisation where she was working disapproved of the idea of shaping, changing or disrupting the landscape. Their aim was to keep evidence of human intervention to a minimum (IA16).

Within tourism there is great sensitivity around seeing evidence of other visitors. *Wilderness etiquette* is the diplomatic practice tour operators adopt to maintain an illusion of isolation; ships avoid congregating and crossing paths, in an effort to hide the reality of the number of vessels and visitors in the area (Carver & Tin, 2013). In my experience of seeing the management of shore landings, any snow sculptures that passengers build are flattened by guides at the end of the visit to maintain a façade of an untouched landscape for subsequent visitors. While a furrow of footprints defining a prescribed walking path in the snow is acceptable, anything outside of this boundary despoils the aesthetic and wilderness experience that visitors anticipate. People have paid to see a pristine Antarctica. A common Antarctic tourism mantra is, “leave nothing but footprints” (Antarctic Logistics & Expeditions, 2021). Yet the print of a boot on snow can be a violation if it steps outside of acceptable behaviour or disrupts the untouched wilderness aesthetic, as I found when creating the ephemeral land art series *Leave only Footprints.*

Figure 43. Adele Jackson. *Leave only footprints*, *Paradise Bay, Antarctica,* 2014. ©the artist.

Leave only Footprints comprises images of temporary footprint circles created ashore at visitor landing sites in the Peninsula and South Shetland regions of Antarctica. Conceptually the work explores the conflicts and contradictions between environmental concern and Antarctic tourism (Jackson, 2018c). An example from the series is shown in Figure 43. I created this series while working as an expedition photographer and during deployment transfer voyages to and from the Antarctica Peninsula, travelling as a guest on board tourist vessels. On several occasions, expedition

guides dictated that after photographing the work, the circle edge had to be stamped out to disrupt the orderliness of the circle shape, leaving instead an unstructured imprint on the snow. The requirement to remove the circle reflects the aim expedition teams have of managing passengers in such a way that aside from walking ashore in designated areas or in designated lines, there is no other evidence of their interaction with the landscape.

Whilst having the same requirement to leave no trace and remove their art installations after they were photographed, a small number of artists hosted by NAP station facilities have undertaken large scale mark-making. With more time and logistical support than tourism can provide, artists Chris Drury, Lita Albuquerque and Andrew Rogers each created earthworks in Antarctica. Drury's *Wind Vortices*, which I introduced in Chapter 4, is shown in Figure 12, p. 50. Through a serendipitous combination of events and weather conditions Drury was able to draw a large-scale vortex symbol in a location valued for its ice-scouring winds (Drury, 2008). Referencing the Coriolis Effect, the symbol is a visual interpretation of the spiralling winds that the earth's rotation and differences in air pressure can create. Drawn in a location famed for its scouring winds, *Wind Vortices* represents human interpretations of a natural phenomenon of atmosphere and planetary dynamics, in doing so he invites viewers to reflect on the same. Reaching out beyond the atmosphere, Lita Albuquerque's *Stellar Axis* (Figure 13, p. 52), which I also introduced in Chapter 4, touched the stars. Under the auspices of the NSF art programme, Albuquerque installed 99 blue resin spheres in the formation of a star constellation across the sea ice in the vicinity of McMurdo station (Albuquerque, 2014; NSF, 2006). With guidance from astrophysicist Simon Balm the arrangement of the spheres mirrored the brightest stars directly above the installation site (Fox, 2014). Together with a similar installation at the North Pole, *Stellar Axis* conceptualised the paths of starlight travelling through earth's polar axis. Due to the tilt and rotation of the earth, the Albuquerque's imagined lines of starlight twist into DNA-like strands (Fox, 2014). Engaging with the concepts of this work creates an image in the mind of the earth turning in space within a galaxy within a universe. Rather than looking out to space, Rogers' work focussed on looking down at earth. In his *Rhythms of Life* series Rogers created large geoglyph artworks across the world, which he then photographed using satellite technology. Self-funded, the artist travelled from Cape Town by chartered flight to Dronning Maud Land to access Dakshin Gangotri Glacier which meets the edge of the ice free Schirmacher Oasis. Here he used moraine debris and a stencil to create his *Rhythms of Life* symbol (Figures 44 and 45).

Figure 44. Andrew Rogers. *Rhythms of Life,* Dakshin Gangotri Glacier, 2010. ©the artist. Reproduced with permission.

Figure 45. Andrew Rogers. *Rhythms of Life,* Dakshin Gangotri Glacier, 2010. Satellite image. ©the artist. Reproduced with permission.

Completing the work in Antarctica, Rogers can now lay claim to having created his earthworks on all seven continents. He describes the scale and scope of his project as "unprecedented in modern history" (Rogers, 2020). In some quarters Rogers' work has attracted criticism for having little artistic merit beyond its scale and spectacle (Pancake, 2012). Two research participants were similarly critical of artists whose work in Antarctica they considered to be more spectacle than substance (IR42; ICA48). The feeling here was that artists whose work had a depth of engagement with place and the Antarctic meta-principles of science, cooperation, and environmental protection were favoured over artists whose motivation simply reflected a desire to reach the seventh continent or those who sought celebrity. Despite the criticism directed towards Rogers, environmental values are evident in his work as well as in the work of Drury and Albuquerque. Non-permanence was built into the three projects from the outset. Both Drury and Rogers used the material found in the local environment to create their drawings. Adhering to the leave no trace philosophy, photographs (and satellite imagery in Rogers' case), are the only evidence of the three artworks having existed.

8.4 Acceptable behaviours – infringements and contradictions

Several artists who had visited Antarctica voiced strong opposition to art that was perceived as not sensitively considering the natural environment or which appeared to infringe environmental protection protocols.[130] The Madrid Protocol, site guidelines and designations of environmental protected areas[131] make clear which areas are accessible and which actions are permitted or prohibited. Artists with little knowledge of ATS environmental principles and regulations are at risk of unwittingly contravening them.[132] In the case of the *Antarctic Biennale* some of the artists who were visiting Antarctica for the first time breached codes of behaviour to which other tourists are required to conform. Whalebones, artefacts from the whaling era, which are usually out of bounds

[130] IA16; IO26; IA41; IR42; IA44; ICA48.
[131] I refer here to ASPAs and Antarctic Specially Managed Areas (ASMAs).
[132] The regulations are implemented through domestic legislation.

to tourists, were used as seats (Figure 46). There were also anecdotal reports of some artists urinating and smoking cigarettes during landings (Malvern, 2017; The Times, 2017) both of which are prohibited onshore activities for tourists and their guides.

Figure 46. *Antarctic Biennale artist Yasuaki Igarashi sitting on whale bones,* 2017. ©Antarctic Biennale. Permission requested. Retrieved 11 February 2019, from https://www.facebook.com/antarcticbiennale.eng/photos/960739690799007

While it may be the case that these acts did not contravene the Protocol, public perception is influential in how actions are construed and judged. Urinating on the snow in particular appears to be an affront to the idea of a pristine Antarctic landscape. Anne Noble's *Piss Pole* series is a collection of photographs depicting yellow-stained snow surrounding yellow flags marking authorised outdoor urination sites (Noble, 2014). An image from the collection in shown in Figure 47. The public who visited an exhibition of Noble's work and participated in this study had very strong reactions to these images.

Figure 47. Anne Noble. *Piss Pole #3*, Antarctica, 2008. ©the artist. Reproduced with permission.

In a similar tone to the press story about the *Antarctic Biennale*, the *Piss Poles* stirred emotions of shock and disgust. Respondents felt angry about the sullying of the snow and the spoiling of the pure Antarctic aesthetic. As already discussed in Chapter 5, people found the exhibition confronting and uncomfortable, yet they valued seeing what human presence in Antarctica looks like. Noble's interrogative eye captured an Antarctica that is normally unseen. For the audience, the artwork was all the more important to see because it challenged popular perceptions of the continent. Noble's work opens up a possibility for discussion based on a critical examination of human actions and Antarctic values.

8.5 Environmental values in the marine environment

In addition to boundaries of behaviour, the *Antarctic Biennale* also raised questions about environmental ethics and artistic practice. German artist Julius von Bismarck boarded the ship with a live tropical fish and a water tank within which the fish would be able to survive while submerged in Antarctic waters (Antarctic Biennale [@ABiennale], 2017, June 16). Perhaps inspired by Frank White's "Explorer Fish" analogy of evolution and an astronaut's experience of space exploration (White, 2014, p. 6), Bismarck's *Space Fish / Raumfisch* is intended to mimic tourism and exploration (de Pomereu, 2019; Institut für Raumexperimente, 2017). The Institute for Spatial Experiments describes the artwork as providing the fish "a chance to experience the human luxury of movement to anywhere in the world" (Institut für Raumexperimente, 2017, p. 1), and as such, the work has been described as a "whimsical metaphor" (de Pomereu, 2019, p. 339).

Figure 48. Julius von Bismarck. *Space Fish / Raumfisch* [in the water], 2017. © Antarctic Biennale. Permission requested. Retrieved on 13 April, 2019 from https://www.facebook.com/antarcticbiennale.eng/posts/994190677453908

Figure 49. Julius von Bismarck. *Space Fish / Raumfisch* [out of the water], 2017. ©Antarctic Biennale. Permission requested. Retrieved on 13 April, 2019 from https://www.facebook.com/antarcticbiennale.eng/posts/994190677453908

However, any amusement found in the work has a morbid twist. An interview respondent who participated in the Biennale reported that due to environmental protocols, "the fish had to be killed before we went [beyond 60° South latitude], because that's the rules of the Treaty" (ICA14).[133] This course of action corresponds with Article 4 of Annex II of the Madrid Protocol. Undeterred, the artist proceeded to perform the *Space Fish* installation with the dead fish. Images posted on the *Antarctic Biennale* social media platforms (shown in Figures 48 and 49) show the dead fish hooked inside the submersion tank and photographed to give the appearance of it being alive and swimming. The use of a dead animal in the making of art was an isolated incident in the Biennale, but it is not the first time dead fish have been used to create Antarctic art. In 2004 Japanese artist Boshu Nagase produced a record of more than 50 Antarctic fish species using the traditional Japanese artwork of gyotaku printing (Nagase, Fukuchi, & Marchant, 2006). Gyotaku is a death mask of sorts. The technique involves overlaying paper onto a fish's dead body and gently pressing coloured tanpo (ink pads) on top to create an impression of the details of the fish's form; the final image is a precise record of the fish's size and appearance down to the definition of individual scales (Nagase et al., 2006). As an accurate record of species and a form of illustration, the artworks have scientific and aesthetic value.

Bismarck's intention to create an artwork with a captive live animal, and his willingness to use its corpse rather than abandon his idea, raises ethical questions, but is this any more objectionable than

[133] There is a slight misrepresentation that requires correction here, as it is the Protocol on Environmental Protection to the Antarctic Treaty (Madrid Protocol), not the Treaty itself, which deals with such matters.

creating art out of the fish killed in the name of science, as with the case with Nagase. Is the death of one fish more or less intolerable that commercial fishing? Scientists working in Antarctica must go through animal ethics research authorisation processes, they must conduct environmental impact assessments and secure permits before their work can go ahead. Nevertheless, killing animals whether in the pursuit of science, art, human consumption or sport, is a polarising ethical debate. Bismarck's and Nagase's artworks present an opportunity to discuss anthropocentric and biocentric values. In the former, only humans are worthy of ethical consideration and as such have dominion over other living species, whereas biocentric values challenge the notion of human superiority and instead place value on all living organisms (Sarkar, 2012).

Chris Drury's *Albatross* (Figure 50) and Bruce Pearson's *Troubled Waters* (2012) offer a narrative of the impact of longline fishing on albatross populations and point to some of the complexities and clashes between anthropocentric values-based policy and biospheric realities. These are pertinent issues in contemporary Antarctic policy and activity where fishing and bioprospecting are increasing pressure on ecosystems (Ainley & Brooks, 2013; Brooks & Ainley, 2017). This shows that artists' work has value in opening up problematic topics for public discussion. The policy context is thus: CCAMLR was established in 1982 to regulate fishing and to preserve krill populations in the Southern Ocean and although CCAMLR takes an ecosystem-based management (EBM) approach in regulating commercial fishing activity, an anthropocentric stance prevails.[134] The meaning of conservation in the CCAMLR context is the capping of extractive practices to maintain sustainable marine life population levels for continued extraction for human consumption. In the longline fishing industry for Antarctic and Patagonian toothfish, which caters for the high-value luxury market (Grilly, Reid, Lenel, & Jabour, 2015), economic value is prized above the lives of the fish. Nevertheless, CCAMLR's EBM approach is currently considered the highest standard in international fishing regulation practice (Nagase et al., 2006). However, there are limits to CCAMLR's ability to regulate activity. In addition to the substantial challenges that illegal, unregulated and unreported fishing presents (Miller, 2015), the resources that CCAMLR seeks to preserve move outside the CAMLR Convention and MPA boundaries. Lines on a map are a construction only of a human political and geographic imaginary to which nature does not conform. As I have discussed elsewhere (Jackson, 2019), Drury's *Albatross* combines a map of Antarctica and the Southern Ocean, with wind current data and the GPS track of a single wandering albatross. Condensed into a single image is the complex relationship between biosphere, hydrosphere and atmosphere. The albatross track circumnavigates the continent following the direction of the westerly winds and circumpolar current. The areas that show the greatest activity are the bird's nesting sites and the bio-rich feeding grounds of the polar front, where warm and cold air and ocean meet. The fixed boundary lines of the CAMLR Convention area are based on the polar front (CCAMLR, 2019), yet the polar front is not static, it shifts north and south through the dynamic actions of ocean and wind currents. Attracted to the bait laid by longline fishing vessels, albatross and other seabird species get caught on hooks and pulled underwater where they drown. Pearson's work highlights this human impact.

Pearson, a wildlife watercolourist, worked as a field assistant ringing albatross in the sub-Antarctic region in the 1970s. In every spare moment he would sketch the birds' movements and behaviours.

[134] In Article II(2) of the Convention on the Conservation of Antarctic Marine Living Resources (CAMLR Convention) fish and krill are recognised as vital species within the ocean ecosystem but also a resource for humans to extract for "rational use" (CCAMLR, 1980b).

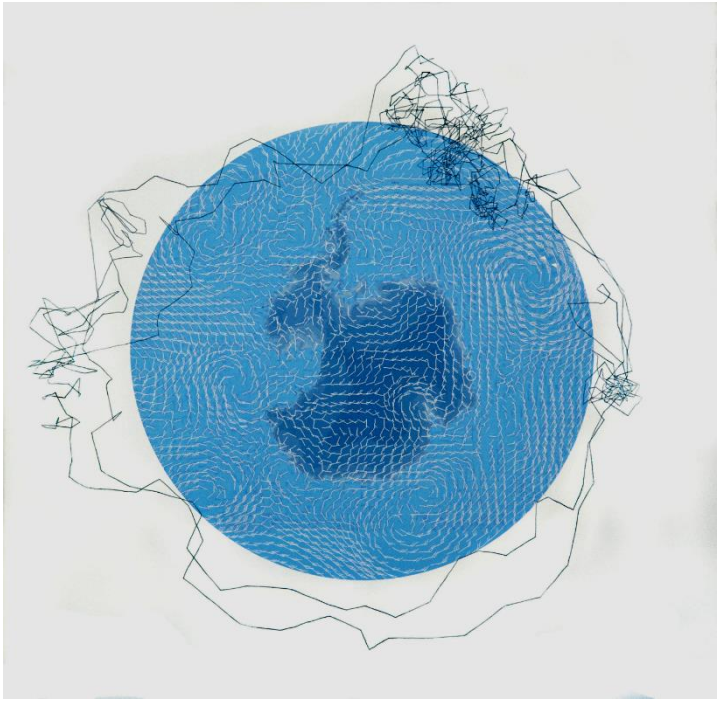

Figure 50. Chris Drury. *Albatross*, 2007. ©the artist. Reproduced with permission.

Figure 51. Bruce Pearson. *Collision: Shy albatross and trawler cable*, 2010. ©the artist. Reproduced with permission.

In the forty years since Pearson painted his first wandering albatross, their population has gone from abundance to near extinction. Longline fishing bycatch has decimated albatross populations and prompted international action to alter and regulate fishing practices to minimise seabird bycatch (Anderson et al., 2011). Feeling a personal sense of loss, Pearson recognised that the fatalities included “my birds” (Pearson, 2012, p. 15). Through sponsorship from Birdlife International, in 2010 and 2011 he accompanied a fishing vessel to document how the human and albatross worlds collide (Pearson, 2012). Figure 51 is a sketch from the voyage. Documenting his first encounters with the

birds through to witnessing their plight at human hands *Troubled Waters* recounts a story of life and death as a plea for conservation. The combined narrative of Drury's and Pearson's artworks highlights the devastating impact that human activity can have on other species, and in doing so accentuates the failings of an anthropocentric worldview. Furthermore, the work emphasises that the dynamic interactions and interconnections between earth's biosphere, hydrosphere and atmosphere do not conform to human-defined boundaries.

8.6 An interconnected planet

While participants advocated that Antarctica needs to be protected against human impacts locally, reinforcing Hemmings call for maintaining the idea of Antarctic exceptionalism (Hemmings, 2018), they also expressed wider global environmental concerns. Such concerns require the continent to be understood as interconnected with the rest of the world environmentally and politically, rather than detached and remote. The idea that every aspect of the natural world (including humans) is inextricably linked came up in several research conversations.[135] The term *environmental values* does not adequately represent the emphasis in participants' responses, as the majority of concepts reflected ideas associated with a whole earth perspective.[136] This planetary focus echoes the findings of McLean and Rock, whose study into the value Antarctic researchers associate with the continent showed that they placed the greatest emphasis on "the Antarctic's role as a component of the Earth's climate system" (McLean & Rock, 2016, p. 291). The whole earth viewpoint, both in terms of the recording of an image of earth from space and the development of environmental and ecological concepts that advance the idea of the earth as a complete, interconnected and living system, emerged in the 1960s (Poole, 2008). It is easier to conceive the earth's environmental systems as interconnected and interdependent when looking at the planet as a whole. The absence of boundaries is evident when viewing earth from space. Many astronauts have reported experiencing what Frank White (2014) terms "the overview effect"; seeing the planet as whole suspended in space can prompt a cognitive and emotional response that deepens appreciation of the interconnectivity of the planet's life and life-sustaining systems (White, 2014). Although efforts to sustain life beyond earth are advancing, writing in the 1970s Tuan described earth as, "a speck of fertile dust in lifeless space; it is our only possible home" (Tuan, 1975, p. 163).

While astronauts have the physical and sensory experience of leaving earth and experiencing the overview effect, for everyone else the ability to reach some comprehension of the planet as a whole relies largely on imagery and imagination. Perhaps partly in response to Stewart Brand's 1966 campaign "Why haven't we seen an image of the whole Earth yet?" NASA eventually supplied the first good-quality image of the whole earth in 1967 (Poole, 2008, p. 73). The "blue marble" image of earth, taken five years later, is reportedly the most reproduced image in history (Poole, 2008, p. 82). Apollo 17 astronaut Harrison Schmitt took the photograph on 17 December 1972 at the height of the austral summer, showing Antarctica at full tilt towards the sun (Figure 52).

[135] IOA2; IA3; IA41; IA44; ICA48; IO49.

[136] Concepts of interconnection have also gained traction in world health initiatives and research that recognises the links between human, animal and environmental health, such as the "one-health" perspective (Center for Disease Control and Prevention [CDC], 2020; Food and Agriculture Organization [FAO], 2011).

Figure 52. NASA. *The Blue Marble - Image of the Earth from Apollo 17*, 1972. Retrieved on 13 December 2020 from https://www.nasa.gov/content/blue-marble-image-of-the-earth-from-apollo-17

The advances in satellite technology and time-lapse imaging now allow us to see some of the dynamics of earth's systems in action and to see changes over time, making it easier to conceptualise Antarctica's centrality in influencing the earth's environmental balance. Reflecting this idea, one respondent explained that,

> *Antarctica is a large, unique component of the planet that is our only home. It interacts with the rest of the world in critical ways. It influences, among other processes, climate, sea level, constituents of the atmosphere...As an interconnected and interdependent society, we are obliged to understand and to value these processes. (IO49)*

The impacts of the freezing and thawing cycles of Antarctic ice have such a significant influence on the planet's atmosphere, climate, ocean currents and sea level, that an increase in ice melt through rising temperatures is a substantial threat to life on earth. Global heating and climate change are urgent issues.

8.7 Beyond boundaries – ice, sea and sky

Considering Antarctica is both an indicator and a driver of a changing climate, it is not surprising that *climate change* was a frequently occurring term in the data. The term came up in 62% of the interviews. The consequences of climate change have major implications for life on earth. The UN Intergovernmental Panel on Climate Change (IPCC) agree that an increase in the frequency and severity of extreme weather events and coastal community displacement through sea level rise will result in a greater number of humanitarian crises (IPCC, 2014). The biosphere as a whole may be facing the sixth mass extinction event due to loss of habitat and food sources, and loss of species through ocean temperature change and acidification (Barnosky et al., 2011; Ceballos et al., 2015;

IPCC, 2014). Science tells us that Antarctica's ice plays a pivotal role in earth's atmospheric and ocean systems. Some scientists propose that the heating of the atmosphere and oceans and the subsequent loss of Antarctic ice will fundamentally change the ocean circulatory system, making parts of the planet uninhabitable for many forms of life, including human (IPCC, 2019a). The environmental imperatives of a changing climate exercise the minds of many contemporary artists, several of whom have actively sought to work in Antarctica because, as Nielsen observes, "Antarctica has come to play a dominant role as a symbol for climate change, for fragility and for the threat of melting ice" (Nielsen, 2020a, p. 120).

8.7.1 Melting ice, rising sea

Melting ice is a sign and symbol of a changing climate. Moreover, "glaciers do not just melt; they are imbued with cultural, scientific, political and aesthetic meanings" (Nüsser & Baghel, 2014, p. 150). Similarly, meaning and symbolism is grafted onto sea ice, icebergs, and ice shelves. In her exhibition and publication *Vanishing Ice*, Matilsky employs the strategy of tracking ice narratives by juxtaposing past and present artworks of the last three centuries to show the extent of glacial retreat. To further contextualise climate change Matilsky provides a timeline spanning four centuries charting events in polar exploration, the development of oil economies, climate science and a running total figure for the concentration of CO_2 in the atmosphere. The express intention of the project, says Matilsky, is to "galvanize environmental activism" (Matilsky, 2013, p. 9). The idea of arts serving such a purpose was a view expressed by several participants and it is a topic explored in Chapter 9, which discusses public engagement.

Loss and grief are often at the core of melting ice narratives. Discussed in Chapter 7, Camille Seaman's photographs of icebergs documented in *The Last Iceberg* (2008) and *Melting Away* (2014) are family portraits of ancestors, with each image offering a "glimpse of their soul" (Seaman, 2008, p. 10). The loss of ice leaves the artist "heartbroken" (Seaman, 2014, p. 20). American artist and NSF recipient Xavier Cortada, South African artist Katrine Classens, and Czech Republic artist Veronika Podlasová have each used melted ice to create watercolour paintings that serve as trace memories of retreating glaciers, crumbling ice shelves, and thinning sea ice (Classens, 2019; Cortada, 2007; Jankowska, 2019). Classens describes her work as creating "space to remember, to mourn, and most importantly, to empathize with our melting world" (Classens, 2019). Literally driving the message home, Anne Brodie transported a large piece of Antarctic ice back to the UK with support from BAS. The ice was used in an installation at the *Polar: Fieldwork and Archive Fever* symposium marking the IPY 2007/08. The installation contributed to climate change discussions though confronting the audience with the physical reality of melting ice (Yusoff, 2008). The relationship between melting ice and sea-level rise is the subject of Zaria Forman's artwork. Using the medium of chalk pastel, Forman has created large-scale photorealist depictions of Antarctic ice and the shorelines of the Maldives (Forman, 2017a). Figures 53 and 54 show an image from each series. Sea level rise projections forecast that much of the low-lying Maldives archipelago will become submerged or uninhabitable (Gagain, 2012). Forman uses her work to raise public awareness and influence people to make changes in their lives (Forman, n.d.). Similarly, in an effort to raise awareness and understanding of ocean dynamics and the effects of climate change on New Zealand's coastal regions, Australian-born New Zealand-based artist and arts educator Gabby O'Connor works in collaboration with oceanographers fusing science, art and education to engage, inform and inspire action (O'Connor, 2020). I discussed her work in more detail in Chapter 9.

Figure 53. Zaria Forman. *Whale Bay Antarctica no.1*, 2016. 60 x 90 inches, soft pastel on paper. ©the artist. Reproduced with permission.

Figure 54. Zaria Forman. *Maldives no.10*, 2014. 45 x 75 inches, soft pastel on paper. ©the artist. Reproduced with permission.

8.7.2 Atmospheric change

Although climate change is often narrated through images of melting ice, it is the changes in the atmosphere and the consequences that these changes have on the reflection and absorption of solar radiation that are key factors in earth's temperature and climate system (Ledley et al., 1999). However, perhaps because of their invisibility, atmospheric gases are harder to visualise than melting ice. Tackling the challenge, Argentinian born artist Andrea Juan, who established Argentina's NAP art programme as the head of cultural projects for DNA, developed a visual language that translates atmospheric gas compounds into artistic abstract representations (Juan, 2008a). Juan worked in Antarctica for nine seasons, whilst coordinating the DNA art programme. In her *New Eden* and *Solar Storm* series (Figures 55-58) dazzlingly coloured textiles are an unexpected jolting contrast with the subtle grey, white and blue tones of the Antarctic landscape. The vivid saturated colours are out of place.

Figure 55. Andrea Juan. *Solar Storm 638*, 2014. ©the artist. Reproduced with permission.

Figure 56. Andrea Juan. *Nuevo Eden 4199*, 2012. ©the artist. Reproduced with permission.

In my reading of Juan's work, *Solar Storm 638* (Figure 55) is an abstract representation of the ozone depleting effect of synthetic gases. The blue/purple fabric cutting across the frame represent a weakening of atmospheric defences against ultraviolet radiation. In *New Eden 4199* (Figure 56) the trail of red-coloured fabric that floats in the air and stretches across the image serves as a metaphor for the production and dispersal of methane and other greenhouse gases into the atmosphere. A consequence of increased greenhouse gases is the increased absorption and emission of infra-red radiation which in turn increases global temperatures (Ledley et al., 1999; IPCC, 2019b). As an acknowledgement of the anthropogenic sources of greenhouse gases, a human figure is shown as the origin of a stream of tangled red in *Red 13* (Figure 57). A translucent red veil shrouds the entire landscape in *New Eden 4116* (Figure 58); the image is suggestive of traces of gas layered over the ice. The idea of layering reads as a metaphor of the annual snowfall and the trapping of pockets of gas between ice crystals year upon year over millennia. From these layers of trapped gas scientists have extracted past climate data confirming the rapid acceleration of CO_2 levels, and temperature change corresponds with anthropogenic CO_2 and methane emissions. The layering metaphor extends to the idea of the Anthropocene, the proposed geological epoch that describes the global environmental impact of human activity since industrialisation[137] embedded into the geological stratigraphic record (Crutzen, 2006; Lewis & Maslin, 2015).

[137] Crutzen (2006) proposes 1784 is the starting point for the Anthropocene coinciding with James Watt's design of the steam engine. However, there is debate concerning defining a starting point as this has political and scientific implications. For further discussion see (Lewis & Maslin, 2015).

Figure 57. Andrea Juan. *Red 13*, 2005. ©the artist. Reproduced with permission.

Figure 58. Andrea Juan. *Nuevo Eden 4116*, 2012. ©the artist. Reproduced with permission.

8.8 Humanitarian implications of climate change

The combined effects of atmospheric change, melting ice and sea-level rise are already causing environmental and humanitarian disruption and crises (Afifi & Jäger, 2010). These situations are likely to increase in regularity and severity if little action is taken to curb carbon emissions (IPCC, 2014). Returning to the blue marble image, it is pertinent that this depiction of the planet has been described as a "photographic manifesto for global justice" (Poole, 2008, Figure 18). Global unity in the face of climate breakdown is one of the ideas that artists Paul Miller, and Lucy and Jorge Orta have explored. In his *Book of Ice* Miller states, "More than ever we are interconnected, and interdependent" (Miller, 2011, p. 9). Stressing the worldwide impact of climate change he observes, "Whether you're black, white, Asian, Latino, any particular ethnic group...These are issues that face all of us" (O'Meara, 2020, p. 1). Furthermore, his view is that "climate change should unite all people regardless of race or ethnicity" (O'Meara, 2020, p. 1). Recognising and using art as a "highly politicised medium" (Glasberg, 2008, p. 1), Miller describes Antarctica as, "a point of entry for contemplating humanity's relationship with the natural world" (Bergman-Debes, 2017, p. 6). Miller's *Manifesto for the People's Republic of Antarctica* is a poster campaign for an imaginary Antarctic

revolution. Figure 59 shows three posters from the series. Culturally, poster campaigns are an effective political and commercial communication device. The posters Miller has created are modelled on an aesthetic originating in the 1920s Russian constructivist socialist movement. Simple yet striking graphic compositions of shape, pattern and colour grab and hold a viewer's attention. Miller's posters distil historic, political, cultural and environmental references into "visual sound bites" (Miller,2011, p. 56). Shades of blue have replaced the red colour scheme typically found in communist and socialist graphic design. The artist's use of light blue is suggestive of ice, water and sky, while the darker blue evokes naval associations. Coined "the blue planet" (British Broadcasting Corporation [BBC], 2001) and "the blue marble" (Poole, 2008, p. 82), blue has become a colour symbolic of the planet as a whole.

Figure 59. Paul. D. Miller. *Manifesto for a Peoples' Republic of Antarctica*, 2008. ©the artist. Permission requested.

Miller's political comment stems from the ATS and the symbolism the continent inspires (Miller, 2011). Hailed as an achievement in Russian and US diplomatic negotiation during the Cold War period, and celebrated as one of the most successful international peace treaties, the Antarctic Treaty represents a unity of nations. Furthermore, the abeyance of sovereignty claims and the "protection of the Antarctic environment and dependent ecosystems in the interest of all [hu]mankind as a whole" (Protocol on Environmental Protection to The Antarctic Treaty, 1991, p. 1), contributes to the idea of Antarctica as a global commons. Miller says, "Antarctica is a commons that we all share...That's what I wanted to use as a touchstone for this project" (Miller, 2011, p. 12). To foster international allegiance to his cause Miller has translated the word Antarctica into Chinese, Greek, Hebrew, Hindi, Japanese, Korean and Urdu scripts on separate posters. Using the term *People's Republic*, typically associated with a democratic political structure resulting from a socialist revolution, Miller's campaign calls for political and social action where people unite to defend the non-human world against humans for the sake of human lives. His motivation is the thought that "In the future the planet will be here - we, as a species, might not" (Miller, 2011, p. 9).

Lucy and Jorge Orta are similarly concerned about the survival of humans in the face of climate change, but their conceptual narrative is different to that of Miller. They reimagine Antarctica as a place of refuge for people of the world. The Ortas and Miller have each communicated their idea in logo form. In a revision of the United Nations logo, Miller replaces the world map of nations with a map of Antarctica, signifying nations uniting for Antarctica (Figure 60). Lucy and Jorge Orta embed a

map of the world within a map of Antarctica, emphasising the idea of the continent as a refuge for all humanity (Figure 61).

Figure 60. Paul D, Miller. *The Book of Ice,* 2011. Endpaper design. ©the artist. Permission requested.

Figure 61. Lucy and Jorge Orta. *Antarctic Passport logo*, 2008. ©the artists. Reproduced with permission.

Social and humanitarian concerns have been the motivation of the Ortas' work since the 1990s (Pietromarchi, 2008). Their invitation to participate in *The First End of the World Biennial* in 2007 resulted in the temporary installation *Antarctic Village – No Borders*, an encampment of fifty tents symbolising "a place of welcome for those fleeing conflict or environmental catastrophes" (University of the Arts London, 2014). Shown in Figure 62, each tent was adorned with the national flags of Antarctic Treaty signatory states along with the text of the Ortas' proposed reworking of Article 13 of the United Nations Universal Declaration of Human Rights. Their amendment reads,

> *Everyone has the right to move freely and circulate beyond state borders to a territory of their choice. No individual should have an inferior status to that of capital, merchandise, communication, or pollution that traverse all borders. (Orta & Orta, 2017, p. 25)*

As Germana Nicklin observes, "Antarctica is arguably the only geographical territory left on Earth without political borders" (Nicklin, 2020, p. 27). In reality there are "border-like processes" and "implied' border systems" at play surrounding access and the movement of people to and from the continent (Nicklin, 2020, p. 29). Nevertheless, in framing Antarctica as a place of free movement and refuge, the artists are engaging with the humanitarian implications of climate change in an attempt to stress the urgency of an escalating crisis (Orta, 2016). For the artists, their work is a vehicle for

developing public awareness and triggering social and political action on humanitarian and sustainability issues.

Figure 62. Lucy and Jorge Orta. *Antarctic Village - No Borders,* 2007. ©the artist. Reproduced with permission.

8.9 Shifting the focal point away from anthropocentrism

Climate change is one of many indicators of living in the Anthropocene. Although the Anthropocene is not currently an officially recognised geological epoch, the environmentally damaging and disruptive influence of humans' industrial and economically driven behaviours on a planetary scale is increasingly recognised and accepted (Crutzen, 2006; Kingsnorth & Hine, 2014; Morton, 2013). As Salazar puts it, the current era is one where "human and earth futures are increasingly entangled and interdependent in their mutual uncertainty" (Salazar, 2020, p. 73). There were only two instances of the explicit use of the term *Anthropocene* in the interviews. In one, an artist used it to explain that their work was not consciously about the Anthropocene (IA34). In the other, it was used to contextualise the historical development of environmental art (IA35). Despite its infrequency in the data, the idea of the Anthropocene cannot be overlooked in a discussion about environmental interconnectivity and global environmental concern. In the Antarctic Anthropocene context,

> *Antarctica is now increasingly understood as an environment irrevocably altered by remote human action and one that will irrevocably change the course of human lives all over the globe. (Leane & McGee, 2020, p. 1)*

Importantly, a criticism of the Anthropocene is its homogenising tendency. The concept does not distinguish from where (which states and cultures) the human-created environmental change and pollutants originated (Leane & McGee, 2020, p. 3). Considering that "Antarctic Treaty states include some of the biggest polluters of the atmosphere" (Chaturvedi, 2020, p. xiii) it is essential to recognise that states have not and do not contribute equally to the impacts and changes that the Anthropocene defines (Leane & McGee, 2020). This said the Anthropocene is helpful for conceptualising the global reach of human-induced environmental change. Discussing anthropogenic

environmental impact in a geological context allows the consequences of increasing global temperatures to be considered in relation to past epochs and habitable conditions for life on earth in its current iteration. Furthermore, the Anthropocene discourse provides a space for discussing the problems of, and alternatives to, the dominance of anthropocentric environmental values, law and behaviours (Fremaux, 2019). As Chaturvedi observes,

> *There is a growing sense of urgency based on the acknowledgement that the extent to which human actions are causing far-reaching, and in some cases irreversible, global change to the life-sustaining resources of the blue planet calls for radically different philosophical, social, economic and political views of our environment at various scales. (Chaturvedi, 2020, p. xi)*

The majority of participants expressed a concern about the impact of human-induced climate change on Antarctic ice and the consequences of its melting for the planet as a whole.[138] 15 scientists and artists (30% of those interviewed) expressed an urgent need for action to change behaviour and policy, and they all saw art as contributing to an effort to bring about such action and change. The same motivation inspired the creation of the *Antarctic Biennale Vision Club* (ABVC). The ABVC was conceived as a platform for researchers from disciplines spanning the humanities, natural science, philosophy, journalism, art and architecture to devise,

> *Productive and scalable solutions which will act as a catalyst in the transformation of our civilization towards an eco-friendly and healthy society...It will discuss long-term scenarios for humanity and its relationship with our planet...By creating environmentally sustainable models of living in 'shared spaces', we can collectively formulate a paradigm for a non-invasive, non-destructive alternative way of life, in which we would still thrive. The Club sees Antarctica as a symbol and manifestation of such a way of living. (Antarctic Biennale, 2017b, p. 10)*

Although any visionary concepts or outcomes from the ABVC symposia are yet to be made public, the fact that the Biennale initiative included the ABVC concept demonstrates recognition of a need for reimagining human relationships with the natural world, with Antarctica as a vehicle or focal point for this reimaging. While artists may be motivated to engage critically with the topic of climate change there may be limitations to the political influence their work might have. As a participant observed,

> *Because the Antarctic and extreme environments in general are places where anthropic change is more visible than other places, where change is actually physically happening more rapidly, you can see art being deployed that talks about those things...what gets in the way often is politics because [some] politicians are shy about talking about climate change. (IC35)*

National interests and political affiliations can conflict with the need for an international global approach to address planetary environmental issues. The United Nations Framework Convention on Climate Change (UNFCCC), which has near universal membership of 197 signatory states, the Kyoto Protocol, and the Paris Agreement, have each made substantial advances in securing international political commitment towards reducing emissions and addressing anthropogenic climate change. Yet in November 2019, Donald Trump, who at the time was the president of the USA (a state responsible for some of the world's highest levels of greenhouse gas emissions), took the first steps towards

[138] IOR1; IOA2; IA3; IA6; IOC11; IA12; IA13; ICA14; IA16; IC17; IOR21; IO24; IA25; IO26; IR27; IC29; IO30; IR31; IOA32; IA33; IA34; IC35; IR36; IR37; IA38; IA41; IR42; IA43; IA44; IO46; IA47; ICA48; IO49; SP67; SP92.

withdrawing from the Paris Agreement (United Nations Secretary-General, 2019). Unwillingness to participate in cooperative political commitment and action exposes the problems of a nation-state mindset and fails to recognise the borderless reality of an interconnected and interdependent earth system. Collectively, the economic models, industries and consumption of every nation impact Antarctica, and in response, as a consequence of an unavoidable feedback loop (Morton, 2013), Antarctica impacts all nations. As the United Nations observes, "Climate Change is the defining issue of our time and we are at a defining moment" (United Nations, 2019a, p. 1). How humans respond individually and together, as communities, societies and nations, will determine the circumstances of human and environmental futures. In their exploration of "trajectories of the earth system in the Anthropocene", Steffen at al. are clear,

> *Collective human action is required to steer the Earth System away from a potential threshold and stabilize it in a habitable interglacial-like state. Such action entails stewardship of the entire Earth System—biosphere, climate, and societies. (Steffen et al., 2018, p. 8252)*

Although the US's withdrawal from the Paris Agreement was formalised 4 November 2020, (United Nations Framework Convention on Climate Change [UNFCCC], 2020), recognising the need for collective global action, the incoming president Joe Biden took steps to reverse his predecessor's actions and reinstate the US's commitment to the Paris Agreement immediately after his inauguration in January 2021 (United Nations, 2021).

8.10 Towards an ecocentric perspective

The stance that Steffen et al., (2018) take chimes with an ecocentric conceptualisation of the earth and humans within the earth system. The definition of ecocentric I am using here is one in which all lifeforms and non-biological features have intrinsic value as components of the interconnected spheres of life on earth (Sarkar, 2012). Importantly, some of the environmental values that emerged in the research interviews had an emphasis on interconnectivity and aligned closely with an ecocentric worldview (IA41; IA44; ICA48; IO49).

Worldviews that position humans as part of an interconnected natural world system are common to many Indigenous cultures (Berkes, 2012). Despite colonialism's continuing subjugation of Indigenous perspectives and voices across the world (Broughton & McBreen, 2015; Shizha, 2006; Simpson, 2004; Smith, 2016; Stewart-Harawira, 2013; Stewart & Mika, 2016; Wilson, 2004), an outcome of the fight for equality and recognition is that,

> *The contribution of indigenous peoples and their knowledges is now widely acknowledged as critical to successful efforts to mitigate anthropogenic impacts. (Wehi, Beggs, & McAllister, 2019, p. 1)*

In Aotearoa New Zealand research groups and advisory boards have been established to ensure mātauranga Māori/Māori knowledge is embedded within the nation's research programmes and institutions (Antarctic Science Platform, 2020; Antarctica New Zealand, 2019; Manaaki Whenua Landcare Research, 2020; Ministry of Research Science and Technology, 2007; Wehi, Howe, & Monk, 2020). An example of this is the *Vision Mātauranga* government policy which is designed to, "unlock the innovation potential of Māori knowledge, resources and people" (Ministry of Research Science and Technology, 2007, pp. 1-2). In an Antarctic research context, *Vision Mātauranga* is incorporated into the Ross Sea region Research and Monitoring Programme (Ross-RAMP) (NIWA, 2019). The Ross-

RAMP is a five-year research programme designed to assess the effectiveness of the Ross Sea region MPA (NIWA, 2019). Established in 2017, the Ross Sea is the largest MPA in the world,[139] and currently one of only two in Antarctic waters (CCAMLR, 2020). One of the factors motivating action to protect the area is that globally it is one of the least disturbed marine environments (Department of Conservation, n.d.). The region has some of the highest rates of primary production (Smith Jr & Gordon, 1997) and the Ross Sea is one of the last remaining intact marine ecosystems (Ainley, 2007).

The team leading the implementation of *Vision Mātauranga* within the Ross-RAMP explain that they began their research by,

> *Exploring mātauranga Māori perspectives and relationships with Antarctica, and how those might be expressed through whakairo, the traditional Māori art form that embeds values and history, and acts as a repository of knowledge. (Wehi et al., 2020, p. 3)*

As Te Ahukaramū Charles Royal (Marutūahu, Ngāti Raukawa, Ngā Puhi) explains, whakairo is one of many manifestations of mātauranga Māori (Royal, 2012). The whakairo that James York (Ngāi Tahu ki Ōraka Aparima, Ngā Puhi) and Poutama Hetaraka (Ngāti Wai, Ngāi Tahu ki Wairewa) carved and installed at the Scott Base research station in Antarctica, comprises a pare (lintel) and whakawae (door side panels).[140] Discussed in Chapter 4, York explains that a key idea in his whakairo design is the spider's web which serves as a metaphor for the fragile threads connecting life and ecosystems as a whole (York, 2020:06). In a description for a seminar that introduced *Te Whakairo*, the research project's website states,

> *Their whakairo gives a physical form to a conversation about the common values of mātauranga Māori and science to understand the complexity of the global ecosystem, which includes humanity, and to restore a healthier balance. (Māori and Antarctica, 2019)*

While I do not have the authority, cultural background or lived experience to speak knowledgably about whakairo or mātauranga Māori, in the context of this chapter my interest is in recognising that the *Vision Mātauranga* research project validates the inclusion of multiple worldviews and knowledge systems in Antarctic research. As Royal suggests, whakairo exemplifies the idea of art as an expression and source of knowledge concerning our relationships with the world. He explains "mātauranga Māori responds to the three great questions of life, namely: Who am I? What is this world that I exist in? What am I to do?" (Royal, 2012, p. 35). In my own subjective reading and interpretation of the Ross-RAMP whakairo, the concepts of human, ecosystem and planetary interconnection that the artists have inscribed into the wood resonate with ecocentric values.

The inclusion of *Vision Mātauranga* in the Ross-RAMP and the articulation of mātauranga through the whakairo artform, suggests a significant move towards valuing Māori worldviews and knowledge systems in Antarctic knowledge creation. As Broughton and McBreen observe, embracing multiple knowledge systems "gives us the ability to experience the world in different ways, to recognise how

[139] Despite the size of the Ross Sea MPA, as of August 2020 only 5.3% of total ocean space is designated a protected area (Gardiner, 2020).

[140] Detailed information about this research project can be found on the *Māori and Antarctica: Ka mua, ka muri* website, https://maoriantarctica.org. The concepts behind the project and the whakairo are shared in the documentary film *Te Whakairo: Ngā-Kī o Te Tai Ao The Carvings Carry the Stories of the World* (Wells, Director) (2020) and the booklet *Ka kawe nga kī i te Tonga To carry the knowledge from the South* (Wehi et al., 2020).

those systems affect our perception and understanding, and to extend our understandings" (Broughton & McBreen, 2015, pp. 86-87). Although the extent to which mātauranga Māori is reinstated as a "primary and independent knowledge system" on an equal basis with Western epistemologies is yet to be seen (Broughton & McBreen 2015, p. 86), Ross-RAMP *Vision Mātauranga* offers some hope for a shift in perspective. Philosopher Dr. Krushil Watene (Ngati Manu, Te Hikutu, Ngāti Whātua o Orakei, Tonga),[141] a member of the Ross-RAMP *Vision Mātauranga* research team, suggests that Antarctica "provides us with opportunities to reimagine our lives together, to reimagine our relationships with the natural environment and to rethink our responsibilities" (Massey University, 2020). Antarctica presents an opportunity to reflect upon our interconnection and interdependence with the earth as a whole, and to consider what values are required to sustain a living and liveable planet. Artists have a role in this conversation and this reimagining.

8.11 Reimagining Antarctic values

For artists who engage in global environmental discourses, both Antarctica and its governance arrangements provide inspiration. For some Antarctica is an early warning indicator of environmental catastrophe, for others Antarctica is a beacon of hope and, in Dr. Watene's words, an opportunity to "reimagine" environmental, social and political relationships and values. The need to reimagine and define values might become ever more urgent as threats to the current Antarctic political equilibrium loom on the horizon.

A question hangs over the ability of the ATS to defend the non-human environment against the increasing pressures and impacts of human activity that anthropocentrism condones and perpetuates. For the time being, the instruments of the ATS prevent mineral extraction, prioritise environmental protection and, as discussed earlier, the EBM approach embedded in CCAMLR endeavours to avoid irreversible destruction of marine ecosystems (CCAMLR, 1980a; Protocol on Environmental Protection to The Antarctic Treaty, 1991). Although the agreements do not have expiry dates,[142] their articles do make provision for an ATCP to request a conference to review the operation of an agreement after a specified length of time has elapsed since ratification.[143] Therefore, in policy terms Antarctica's future is not fixed or certain. In globalised industrial economies, the dominant worldview guiding human relationships with nature currently remains an anthropocentric one; the natural world is seen as a resource for human use and consumption (Rees, 2017). There are signs that the ATS may be ill-equipped to protect Antarctica from increasing human encroachment and consumption (Hemmings, 2018).

In her work *Agreement with Nature* Dutch artist Esther Kokmeijer emphasises a perceived fragility of the Antarctic Treaty (Figures 63 and 64). The work is part of a long-term project in which the artist explores evidence of a human urge to control nature (Kokmeijer, 2016a). The Treaty is printed on wafer-thin sheets of porcelain and laid on a bed of cornflower seeds. For the artist, these seeds have several meanings. They are a metaphor for the impact of human manipulation and impact upon the

[141] Dr. Watene's academic title is used here to follow the cultural protocol to acknowledge and show respect and for authority.
[142] The Ross Sea MPA is an exception to this, it is a 35 year fixed term agreement (CCAMLR, 2016).
[143] A review of the operation of the Antarctic Treaty has been possible since 23 June 1991, which marked 30 years after ratification (The Antarctic Treaty, 1959, Article XII). A conference to review the operation of the Madrid Protocol, including the moratorium on mineral extraction, can be requested from 14 January 2048, which marks 50 years since ratification (Protocol on Environmental Protection to The Antarctic Treaty, 1991, Article 25).

natural world. Kokmeijer explains that some arable farmers consider the cornflower a weed growing where it is not wanted, yet for her the flower symbolises "faithfulness and constancy" (Kokmeijer, 2016a). Yet this constancy is threatened, intense agriculture and herbicide use has driven the wild cornflower to near extinction. The colour of cornflower petals are a metaphor for the "deep blue sea", the "pure blue sky" and "intense blue glacier ice", thereby also representing the three states of water: liquid, vapour and solid (Kokmeijer, 2016a). The porcelain Treaty floating on top of the seed bed represents the precariousness of international agreements in resisting anthropogenic threats to the non-human world. There is speculation about whether or not any of the ATCPs will request a conference on or after 14 January 2048 to review either the moratorium on mineral exploration and exploitation or the effectiveness of the Madrid Protocol as a whole.[144] The values that will drive political action and decision-making in the decades ahead are those that are determined in the present, which suggests that defining and articulating those values now is crucial.

Figure 63. Esther Kokmeijer. *Agreement with Nature*, 2016-17. 42 porcelain A4-sized sheets (0.5 mm thick), 10 kilograms of cornflower seeds (± 2-3 million seeds). Droom en Daad Foundation, Museum of Migration collection; Dutch Royal collection. ©the artist. Reproduced with permission.

Figure 64. Esther Kokmeijer. *Agreement with Nature* [detail], 2016-17. ©the artist. Reproduced with permission.

[144] Article 25 of the Madrid Protocol allows for any of the ATCPs to request a conference to review the Protocol on or after 50 years following ratification. The 14 January, 2048 marks 50 year milestone.

One of the programme managers interviewed sees Antarctica's internationality as an opportunity for defining Antarctic values. He explained that "The Treaty's suspension of territorial claims creates the potential for other conceptualisations of land and environment-focussed rights and responsibilities" (IO46). He would like to see artists explore the idea of Antarctica as an international "nation" (IO46). For him, artists are needed to critically examine international political collaboration in managing human activity and protecting the Antarctic environment. Taking his ideas further, he shared the idea of establishing a programme of funding and education to develop artists' "Antarctic values", with the explicit aim of encouraging the production of art that "reflects an Antarctic culture" (IO46). Important to note here is that identity, culture and values are inextricably linked (Weedon, 2004). Furthermore, these three dimensions of a person's sense of self and relationship with the world are multiple and can be malleable. They are influenced and shaped through social interactions, institutions, and environments, including the family, education, media representations, community connections and engagements with the natural world (Bronfenbrenner, 2005), and they can change. As Weeks explains, "Identity is about belonging…At the centre…are the values we share or wish to share with others" (Weeks, 1990, p. 88).

The participants' suggestions of inculcating Antarctic values and developing an Antarctic culture raise interesting questions around what these values are, could be or should be. In the international Antarctic context, do all state actors perceive and define Antarctic values and culture in the same way? Is there a consensus or are there multiple and competing Antarctic values and cultures? To what extent is a recognition of the interconnected and interdependent earth system, of which humans and Antarctica are a part, embedded in Antarctic values and culture? With reference to the discussion in Chapter 6, in a geopolitical context, how can national interests be reconciled with establishing shared international values? Antarctica provides a space for philosophical reflection on the values that govern our actions as a global community beyond individual state interest. This is an area where artists can contribute. The programme manager advocating shared values and culture explained,

> *I would like to see art taking on the role of describing what we think Antarctic culture and the values of Antarctica [are], and how as society we reflect those values back in Antarctica. (IO46)*

Through taking a transnational stance, Antarctica can be seen more holistically as part of "a global culture of the world" (IOR21). Thinking beyond national interest and national boundaries, and embracing ideas of interconnection and interdependence, requires whole planet ecocentric conceptualisations of human relationships with the non-human world. Although he admits that his standpoint may be exaggerated, John Keane, Professor of Politics at the University of Sydney and the co-founder and director of the Sydney Democracy Network suggests that,

> *The continent is a world-leading laboratory in the arts of enfranchising nature. It brings to life, and puts into practice, new ways of imagining the political inclusion of the biosphere as a legitimate, potentially equal partner, within human affairs. In Antarctica, the nature/politics dualism of the doctrine of sovereignty no longer makes sense. (Keane, 2015, p. 25)*

The idea of all entities having an equal place and value within an interconnected system is common in the worldviews of many Indigenous cultures (Simpson, 2000). Participants with Indigenous cultural heritage echoed this. One held the view that "[humans] have a reciprocal relationship with other living things...we are connected, we're not some separate entity from the natural processes" (IA3). Another described herself as "interrelated, actual related relatives, to everything and every

animal on the planet...In my culture, we interact with them as if they were literally in our family" (IA41). Similarly, across the world many Indigenous communities express a shared perspective of interconnection, and co-existence echoing the same declaration, "we are the land, and the land is us" (Million, 2018; Verma, 2007; Viallon, 2018; K. Young, 2018). At this moment in human history it is hard to imagine a politically borderless world where all nations unite and act in the interests of all life and the planet as a whole, yet as artist Camille Seaman observes,

> *If we would allow ourselves to see our relationship with this planet in an interconnected way and allow that interconnectivity to define what it is to be human, our behaviour would inevitably change. (Seaman, 2014, p. 139)*

The continent's ice has such a fundamental role in maintaining the balance of life on the earth, and human activity is having such a fundamental effect on the temperature increases that are melting the ice, that both physically and symbolically Antarctica epitomises earth and human interconnectivity and interdependence.

8.12 Concluding observations

Human impact on Antarctica takes many forms and can have local and global consequences for life on earth. Protecting the local Antarctic environment from the impacts of escalating human presence requires the rationale for human presence to be critically examined. Artists concerned about the global and local impact of their travel to Antarctica feel conflicted as their presence in Antarctica contradicts with their environmental values. To reconcile this they position the value of their work on its contribution to public and political engagement. Artists work can prompt viewers to critically contemplate the cultural and environmental dimensions of human activity.

Participants expressed a very strong desire to protect the Antarctic environment, yet in the case of many, their own presence, and the escalation of human activity in Antarctica more generally, contradicts environmental protection concerns. Maintaining the impression of a pristine Antarctic aesthetic and sense of wilderness is strong in policy and perceptions of acceptable behaviour, but in some cases this is an artifice disguising the extent and evidence of human presence and impact. While artists who are perceived to contravene expected behaviours are vilified, the vast majority of artists' work promotes wilderness and aesthetic values, and adheres to environmental policy. Furthermore, artists are able to draw attention to some of the contradictions and tensions between environmental protection, human impact and an anthropocentric worldview.

Respondents' environmental values reflected a whole earth perspective; the planet is viewed as an interconnected system, and one in which humans are currently having a devastating impact. They recognised that the impact of climate change on Antarctic ice is a critical factor in determining the habitability of parts of the world for humans and other life forms. Seeking to change the current future trajectory requires a shift in values, policy and action, moving away from an anthropocentric worldview to one in which the planetary ecosystem as a whole directs decision-making. In such an ecocentric worldview, human life is a part of the system not the centre of it. Artists who are active in articulating and advancing ecocentric ideas contribute to challenging and shifting cultural and political perspectives. This public facing dimension of artists' work is the focus of the next chapter.

9 Engaging the public

As the most prevalent theme in the data, public engagement and art as a mode of communication is the topic of this chapter. There are three main branches to the discussion. One explores some of the attributes of art as a form of communication; another examines the instrumental application of art to support environmental causes, science and organisational agendas; and a third considers the value of Antarctic art as a source of knowledge and as a cultural legacy.

9.1 A responsibility to share

Apsley Cherry-Garrard, assistant zoologist with the 1910-13 Terra Nova expedition and author of the acclaimed account *The Worst Journey in the World*, wrote that,

> *Every one who has been through such an extraordinary experience has much to say, and ought to say it if he has any faculty that way. (Cherry-Garrard, 1922, p. x)*

Throughout recorded Antarctic history, art has served a public engagement and communication function (Andrews, 2007; Fox, 2005b). The data from this study show that this remains the case in contemporary Antarctic culture: 70% of those interviewed aligned the value of art with a public engagement and outreach purpose.[145] What is striking in the responses is a strong sense of duty towards the public. Respondents, including artists themselves, considered working in Antarctica to be a privilege with which comes a responsibility, almost a moral obligation, for artists to share their ideas, observations, experiences, thoughts and feelings with the public on their return.[146] Recognising that "every single place is precious" (IA16) and understanding the competitive allocation of resources[147] contributed to artists' feelings of responsibility. These responses echo the findings of Shepherd, whose conversations with artists who had participated in Antarctica New Zealand's art programme reported the same sentiment (Shepherd, 2015).

9.2 Transporting audiences through aesthetics, metaphor and emotion

As the majority of people will never visit Antarctica, one of the ways people can vicariously experience Antarctica is through art and imagery. Artists were valued for being able to "bring back part of Antarctica" and "transport" an audience there (IA16; IC20; IO30), or as one respondent suggests,

> *Artists are equipped to evoke the feelings; the ideas; the impressions...the vistas; the largeness of Antarctica to all people that are out there in the world. (IR36)*

Participants spoke of various ways in which art can transport a viewer, all of which began with visual engagement. As humans we have several senses at our disposal through which to explore and

[145] EIP3; IOR1; IOA2; IA3; IA6; IO8; IR10; IA12; IA13; ICA14; IR15; IA16; IC18; IC20; IOR21; IO24; IA25; IO26; IR27; IA28; IO30; IR31; IOA32; IA33; IA34; IC35; IR37; IA38; IR39; IA41; IR42; IA43; IA44; IA47; ICA48; IO49; IC50; SP1; SP2; SP4; SP5; SP10; SP11; SP12; SP15; SP17; SP19; SP33; SP35; SP38; SP41; SP45; SP49; SP61; SP65; SP82; SP85; SP91; SP92.

[146] IA3; IA5; IO8; IA16; IA25; IA28; IR36; IA41; IA44; SP44; SP86.

[147] The term resources encompasses the financial costs plus logistical and space allocation including a seat on a flight; a berth on a ship; food and accommodation on base and in the field; training provision; field support; allocation of field transport and fuel.

understand the world, but we are "primarily visual animals" (IR31) (Tuan, 2012, p. 72). Many participants reported that art excites aesthetic pleasure through an enjoyment of the visual qualities of colour, form, texture scale, composition, and notions of beauty.[148] Indeed, visual pleasure may be all that some people seek from a work of art:

> *Some art is just a beautiful thing, it's there to be aesthetic and to be admired, and to be engaged with in that manner. (IOC11)*

However, although aesthetic appearance and visual curiosity may be what first attracts a person to an artwork, as Tuan points out, "beauty by itself is...empty - a froth" (Tuan, 2012, p. 110). Appreciation of an image's visual qualities is just the beginning of an engagement with ideas and the construction of meaning. Taking an interest in the visual appearance of an artwork is an initial "way in" that provides a pause for reflection that allows space for a deeper engagement (IA9; IC17; IC20; SP43). One artist recalled how the striking visual effect of the colour blue throughout one of his Antarctic exhibitions "pulled people off the street" and into the gallery, where they were then curious to find out more about the ideas behind the work (IA5).

A former programme manager, who had a preference for representational art, argued that this type of imagery helps people who have not visited Antarctica to "see it" (IOR21). In his view, the art had to "look like the Antarctic" (IOR21). He was one of two respondents who regarded conceptual art and non-representational art as "difficult to understand" (IOR21), and not providing any useful information or insights into Antarctica (EIP5). However, other cultural professionals held a different view stating that,

> *A literal view of a place shows you what it looks like, but it doesn't tell you what it means. The way you get to what a place means, and...fix it in people's emotions not just their thoughts, is through metaphorical transformation. (IC35)*

Through utilising references to familiar ideas, imagery, feelings and experiences metaphors create connections and emotional associations within the viewer's imagination. Additionally, cultural references, signifiers and symbolism, which an artist can incorporate or a viewer can apply, provide additional layers of meaning to an artwork and locate it in relation to other ideas. Geertz wrote, "Man is an animal suspended in webs of significance he himself has spun" (Geertz, 1973, p. 5). Metaphors are "instruments of meaning making [in] how people construct reality" (Redden, 2017). They are part of the creative processes involved in creating and reading cultural texts, they enable the recollection of feelings and experiences, and they help make sense of the world (Black, 2013; Kövecses, 2010). Metaphor, language, culture and story are entwined (Kövecses, 2010). In speaking about responses to art, several participants referred to experiential "embodied" responses, where ideas were "felt" and "known" within the body (IA3; IA12; IA28; IA34). These types of reactions were considered to help foster a "meaningful connection", enabling audiences to better understand Antarctica.[149] Anne Brodie's *Breathing Berg*, discussed in Chapter 7 (Figure 36, p. 107), is an example of art imbued with metaphor that can provoke an embodied experience. The work is a video installation that depicts an iceberg that is rising and falling in a steady rhythm, either because of the effect of unseen ocean currents or through the momentum of having recently rolled over. The title of the work invites the audience to view the iceberg as a living entity. Speaking personally, when I engaged with the artwork my breathing slowed down to synchronise with the rise and fall of the iceberg, which in turn prompted me to make connections to the idea of a living, breathing planet to

[148] EIP1; EIP3; EIP4; EIP5; IOR1; IOA2; IC4; IA5; IO8; IR10; IOR21; IR15; IC17; IA25; IO26; IR36; IR40; IA44; IO49; IA51; SP3; SP4; SP5; SP6; SP7; SP9; SP10; SP15; SP17; SP38; SP43; SP47; SP48; SP78; SP83; SP85; SP86; SP94.
[149] EIP1; IOA2; IR10; IA16; IR31; IOA32; SP2; SP12; SP44.

which I am connected. Both the breathing metaphor and the physical embodiment of the rhythm of the ice transports the body and mind. In conversation, Brodie shared with me that *Breathing Berg* was one of the most widely exhibited pieces of her Antarctic work. Its popularity with curators and the public is an indication of the work's ability to captivate an audience in a meaningful way. As Tuan explains, "Metaphors enrich life, making it more vivid, they give us *a feeling* for...the world around us" (Tuan, 2012, p. 94).

Respondents spoke of their encounters with art as emotionally moving,[150] triggering "visceral gut reactions" (IC18). Art was deemed to be able to "talk to the heart" (IR15). The kinds of emotions that participants reported experiencing in response to Antarctic art ranged from awe, compassion, empathy and appreciation,[151] through to shock, disgust, anger and revulsion.[152] Five people reported finding humour and amusement in some work[153] which they found "refreshing", as they said that Antarctic art can sometimes come across as overly serious (IOA2; IA12). There was a recognition that while some artists provide space for contemplation,[154] others are provocative and challenging.[155] Art can "shine a light on something that people don't want to see" (IR15), or "dislodge people from their preconceptions" (IC20). A few spoke of art being able to "shift awareness" (IC20; IA34; IA41). Even art that triggered feelings of dislike and confrontation was positively regarded (EIP4; EIP2). The disruptive ability of art[156] was considered by some as provoking a deeper conversation (IA9; IR27; IA34; SP62). Participants spoke of artists' ability to influence audiences and their views of the world.[157] Art was valued for being able to unsettle people's perceptions of reality and enabling them to consider something in a new way.[158] For some, artists have a "responsibility to challenge their viewers" (SP86). Other criticised the idea of "telling people what to think or feel" (IA5; IA41; IC20; IC29). Two curators favoured nuance and space for interpretation over art that appeared to be didactic (IC20; IC29). There was recognition that art's influence can operate in subtle ways:

> *Art is like water dripping on a stone; it erodes, it gradually reshapes the stone...it can contribute to slight shifts in consciousness. (IC20)*

The ultimate aim and power of art was seen as its ability to stimulate curiosity and prompt people to think and feel.[159]

9.3 Cultivating an emotional connection to the environment

For many participants art's ability to "stir emotions" was aligned to environmental concerns.[160] In the Antarctic context, some see artists as "cultural diplomats for the environment" (Colosi, 2008, p. 40). In Western cultures the combination of art, public engagement and environmental conservation dates back to the 19th century in the USA and in the UK. The European Romantic movement in visual

[150] IC18; IA19; IR36; SP10; SP12; SP45.
[151] ICA14; IR15; IA19; IA34; IA41; SP3; SP38; SP44; SP56.
[152] EIP1; EIP2; EIP3; EIP4; EIP5; ESP7; ESP9.
[153] EIP3; EIP4; EIP5; IOA2; IA12.
[154] IOC11; ICA14; IA16; IA19; IA28.
[155] IOC11; IC20; IC29; SP1; SP11; SP13; SP15; SP36; SP37; SP86.
[156] IC18; SP1; SP11; SP13; SP15; SP36; SP37; SP86.
[157] IOA2; IOC8; IA9; ICA14; IR15; IA16; IA19; IC20; IOR21; IO22; IO23; IO26; IR27; IO30; IR31; IA34; IR36; IA38; IR39; IR40; IA41; IA43; IA44; IA45; IA47; IO49; SP3; SP46; SP49; SP51; SP61; SP86; SP88; SP92; SP93.
[158] EIP3; EIP4; EIP5; IA9; IA12; IC20; IOR21; SP3; SP6; SP34; SP35; SP38; SP40; SP43; SP53; SP67; SP69.
[159] IC20; IA25; IR31; IA33; IA34; IR42; I046; SP3; SP6; SP10; SP11; SP17; SP18; SP35; SP43; SP70; SP86; SP88.
[160] IO8; IR15; IO26; IR31; IA41; IA43; IA44; IC50; IA51; SP3; SP43; SP61.

art and poetry cultivated a shift in perceptions of remote mountainous regions from wild and dangerous terrains to landscapes prized for their inspirational beauty (Coupe, 2000). American artist Thomas Moran's paintings from his Yellowstone expedition of 1871 were instrumental in convincing Congress to pass legislation designating Yellowstone as America's first national park (Fox, 2012a, p. 22). Aestheticizing the natural environment through art has proven to be a successful device and genre for generating public interest and support for conservation and protection. In the 20th century landscape photographers significantly contributed to the genre, joining organisations such as the Sierra Club[161] that campaigned for greater environmental conservation and protection.

American photographer Eliot Porter, who served on the board of the Sierra Club, was one of the first colour photographers to aestheticize the Antarctic landscape (Fox, 2005b; Porter, 1978). Having travelled in 1975 and 1976 with the support of the NSF and USAP, his subsequent publication *Antarctica* (1978) depicts the continent with all traces of human presence erased which, as Glasberg observes, amplifies a sense of an untouched wilderness (Glasberg, 2012). The Madrid Protocol endorses the idea of protecting Antarctica's wilderness and aesthetic values but, as discussed in Chapter 8, these values are not explicitly defined. Nevertheless, the inclusion of these values in the ATS provides a rationale for artists' presence, and consequently the wilderness aesthetic is an enduring trope in Antarctic art and landscape imagery. Fox observes that,

> *Much of the science conducted there is far too abstruse to be of genuine interest to laypeople, but the presentation of a sublime and pristine wilderness establishes an emotional loyalty to the continent that serves the cause. (Fox, 2012a, p. 30)*

Although beautifully composed captivating images such as Porter's contribute to developing public appreciation of Antarctica's sublime natural beauty, the same images can increase people's desire to visit, see and experience the place for themselves. The irony here is that the increased visitor numbers that tourism generates inevitably puts the environment under strain (Glasberg, 2012). This suggests something other than images of beautiful landscapes are required to move people beyond a desire to see and consume a place, towards a desire to prevent human impact on that place. Participants spoke of the need to make people care about and value Antarctica (IO22; IC35; SP78). One explained that,

> *Unless people understand and feel the magic of this place, to them it can be just a far off corner of the planet...why should they care. I think artists have a really important role in helping people who have never been to the continent feel that connection, and be inspired to support actions protecting this truly special place. (SP3)*

Environmental values are a common denominator between many past and current Antarctic art programmes, both within tourism and within those connected to science and research institutes. A desire to raise public awareness of environmental issues and promote environmental protection is an underlying motivation behind several projects, programmes, sponsorships and collaborations.[162] There is a belief that artists and artworks can exercise a "strong sway" (SP88) over the way people think about Antarctica, and that they can cultivate public support for environmental protection.[163] To some extent this idea manifested in the exhibition visitor responses. One visitor (EIP2) reported

[161] Initially established in 1892 to support excursions into wilderness areas of the mountainous areas of the American Pacific coast, the club developed a political environmental conservation dimension in its activity (Sierra Club, 2020).
[162] IOA2; IA3; IOC8; IC17; IOR21; IO23; IO24; IR27; IA28; IO30; IOR32; IR39; ICA48.
[163] EIP5; IC4; IA6; IR39; IC50; IA51; SP1; SP3.

that although he believed human impact in Antarctica to be minimal when considered in relation to the size of the continent, at the same time he recognised he had chosen to turn his gaze away from the human impact he had seen during a recent tourist cruise. The exhibition, which included artworks depicting the materiality of human presence such as waste, vehicles, buildings and infrastructure, prompted him to consider the human environmental impact in Antarctica, which previously he had chosen to ignore. Moreover, the exhibition experience caused him to reflect upon the conflict he felt between his environmental values and travelling to Antarctica or elsewhere overseas.

9.4 Engaging with and responding to global environmental imperatives

There is a strong connection between the public engagement capacity of art and the environmental concerns discussed in Chapter 8. Many participants emphasized that the role of art was to frame an understanding and appreciation of Antarctica within a global environmental context.[164] Art was seen as a critical form of communication for learning about Antarctica in relation to planetary dynamics:

> *Antarctica influences our weather, it drives heat balance around the planet, and some of those esoteric ideas...can be communicated better by artists than scientists. (IR31)*

One participant recounted the impact of an artwork that she had seen which had "challenged the notion that Antarctica has never changed...we've always impacted on Antarctica and it has always responded to us" (IOC11). Others saw art as being able to foster an awareness of human and environmental interconnections (IOA2; SP10). One described how "art can take us into that place of understanding ourselves as part of nature" (IA3). Another claimed that Antarctica should be "in our consciousness" and "part of our humanity" (IR42). In a similar vein, a survey respondent said that,

> *Antarctic artists have the privilege and the burden of giving voice to a part of the world that is both profoundly remote and intricately woven into our identity as global citizens. (SP43)*

Two former Antarctic art programme managers, one from Argentina and the other from Chile, each stated that part of the motivation of their respective programmes had been to engage artists and the public in thinking about human impacts on the environment and the future implications for living on the planet (ICA48; IOA32). Some participants spoke of the disproportionate effect Antarctica has on the fate of the world,[165] a sense of urgency was palpable:

> *Science is failing to connect societies and communities to issues that are critical to the future of the earth and all beings that depend on it. Art has to act as a bridge between science and human communities. (SP7)*

One curator reported a conscious shift towards discussing pressing environmental concerns through the programming of her organisation's exhibitions (IOC11). Even artists who did not set out to explore climate change in their work said that it could not be ignored when working in Antarctica (IA5). Several of the artists interviewed wanted to use their art to develop awareness specifically around climate change.[166] As one artist put it,

[164] SP1; SP2; SP3; SP19; SP34; SP43; SP46; SP61; SP78; SP85; SP92; IOC8; IO26; IA41; IC50.
[165] IA9; IOR1; IOR21; IO26; IA41; IA44; ICA48; SP19.
[166] IA3; IA6; IA25; IO26; IA44.

> *I had to reach people, I had to make them afraid of the big changes that are happening in the world. (IA3)*

Art exhibitions that focus on climate and environmental issues can have a powerful emotional impact. Some visitors have found such exhibitions "absolutely terrifying" (IC17), leaving them with feelings of "emptiness and despair" (IA6). A curator reported people leaving an exhibition in tears even when the artwork "was not preachy about climate change" (IC35). Such work risks creating feelings of despondency and hopelessness, but many participants saw art not only as a way to increase environmental awareness and engage the public in discussion about climate change, but also to nudge people towards action. Some spoke in political terms, describing artists as having the potential to influence voting behaviours now and in the future (IOA2; IO22; IO23; IR27):

> *For people to truly engage...care for the place, and vote in governments that aren't going to destroy the place, artists are really important as a way to connect voters, people to [Antarctica]. (IOA2)*

Jerry R. Schubel suggests that art has the ability to bridge the gap between scientific knowledge, policy and action. In his model of a knowledge-value chain (see Figure 65), Schubel explains that art populates the domain where wisdom and empathy are created, and it is this domain that affects change in policy and action.

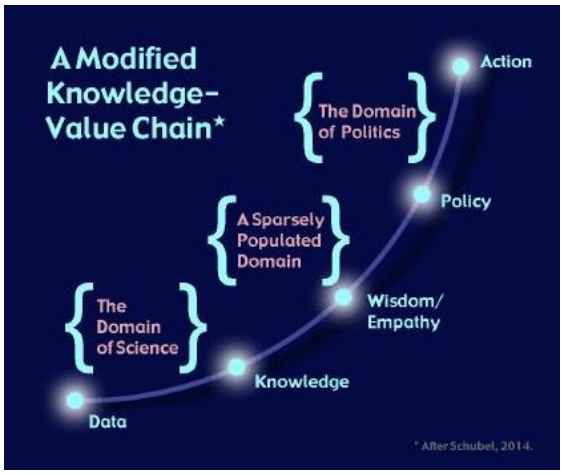

Figure 65. Jerry R. Schubel. *A Modified Knowledge-Value Chain*, 2014. Presented at the conference *Windows to the World: Networking FSMALs to address environmental change* (Schubel, 2014). Graphic design by Faerthen Felix. ©Schubel and Felix. Reproduced with permission.

Schubel is one of a number of scholars who advocate for the inclusion of artists in transdisciplinary environmental research, particularly in field station settings (Duggan, Campbell, Gunther, & Parkinson, 2018; NRC, 2014b). Recognising the urgent need for policy and action to address anthropogenic environmental change, Fox stated in a podcast for the Sydney Environment Institute that "artists have never been more important" (Fox, 2018).

9.5 Convergence of art, science and engagement

For some participants, art that engages with climate change discourse has to be a form of "activism" (IA3; IA6; IA25; IA44), a "trigger" or "catalyst" for action (SP82; SP93). Artists were seen as "agents for change" (SP61):

> *[Art] has got to be provocative, it's got to push people [who] aren't listening to the science around climate and climate trajectories. (IR27)*

Concerned about the insufficient level of political, social and economic change in response to scientific evidence, one artist observed that "the business as usual way of doing things is not working, so we need to change it up...by being truly interdisciplinary" (IA28). Echoing the findings of Schubel et al., she spoke about the need for more collaborations between art, science, and public engagement to communicate environmental messages and to bring about change. Some scientists concurred (IOR1; IR27; IR31), asking for "a more holistic approach" (IOR21). Schubel et al. use the term "convergence" to describe a form of transdisciplinary practice. The concept is explained thus,

> *Convergence is an approach to problem solving that cuts across disciplinary boundaries. It integrates knowledge, tools, and ways of thinking from [several and diverse] disciplines to form a comprehensive framework for tackling scientific and societal challenges. (NRC 2014a p23)*

The collaborative work of New Zealand-based artist Gabby O'Connor and marine physicists Craig Stevens and Natalie Robinson is an example of convergence in the area of climate science, climate change and public engagement (Stevens et al., 2019). O'Connor and Stevens have worked together for over six years. The interconnections between art, science and education are at the core of their co-inquiries (Stevens et al., 2019, p. 1). In 2015/16 and 2016/17 O'Connor was embedded in Steven's and Robinson's ocean physics Antarctic field team. Their research aimed to better understand and communicate the formation and dynamics of the sub-ice platelet layer of sea ice crystals that are created in super-cooled ocean conditions (Robinson, Stevens, & McPhee, 2017). Understanding this type of ice helps to refine the data used in climate models that seek to anticipate the effects of rising global temperatures on the interface between the cryosphere and oceanographic systems (Robinson et al., 2017).

Part of O'Connor's work involved measuring and photographing ice platelets (Figure 66). These served a scientific, an artistic, and a public engagement purpose. On their return to New Zealand O'Connor developed exhibitions that brought their research to the attention of the public (Figures 67 and 68). Building on their experience of previous joint projects (Stevens & O'Connor, 2015) the team combined information sharing with collective art-making processes. School children were involved in making a sculptural interpretation of the sub-ice platelet layer. As a centrepiece to the exhibition the artwork was suspended from the ceiling, giving viewers the sensation of looking underneath the sea ice (Figure 68). Since they started working together, the team have consistently published accounts of their collaborative processes and how their approach has contributed to participants' understanding of climate science, ocean dynamics and climate change (O'Connor & Stevens, 2018; Stevens & O'Connor, 2015, 2016, 2017). Their work is consciously science-focussed. They emphasize that, communicating science through art is a "prime motivation" (Stevens & O'Connor, 2015, p. 10). However, they also value a "merging" and "cross-fertilisation" of their respective art and science disciplines (Stevens et al., 2019, p. 1). They subscribe to the idea that the sharing of ideas, language, questions and perspectives through collaboration is a "key aspect of

present-day science" (Stevens et al., 2019, p. 7). Reflecting the concept of convergence, they report that,

> *The impact of the collaboration has not only been to aid one another's thinking but also to blur the boundary between our ways of thinking. (O'Connor & Stevens, 2018, p. 59)*

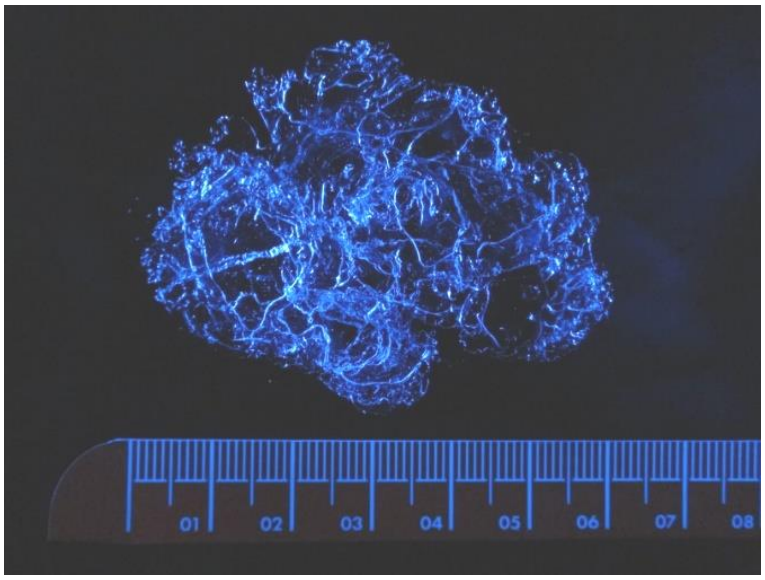

Figure 66. Gabby O'Connor. *Data Days, individual platelet ice crystal,* 2016 ©the artist. Reproduced with permission.

Figure 67. Gabby O'Connor. *Data Days,* 2017. Retrieved on 10 November, 2020 from http://gabbyoconnor.squarespace.com/#/new-page/ ©the artist. Reproduced with permission.

Figure 68. Gabby O'Connor. *Studio Antarctica* exhibition*,* 2016. Retrieved on 10 November, 2020 from http://gabbyoconnor.squarespace.com/#/studio-antarctica/ ©the artist. Reproduced with permission.

For Stevens and O'Connor the rationale for transdisciplinary convergence is a recognition of the "need to make stronger links between science and society", particularly in the area of understanding and responding to environmental imperatives (O'Connor & Stevens, 2018, p. 57). O'Connor describes her work as, "transdisciplinary Antarctic climate communication" (O'Connor, 2020). In some ways O'Connor's positioning chimes with the intention of the fourth IPY 2007-08, a major international polar-focussed scientific research programme, which was "Driven by a sense of urgency because of the significant environmental changes occurring at the Poles" (Kaiser, 2010, p. 7).[167] As a collective effort, 63 nations participated in research to contribute to knowledge of the physical, chemical, biological and social systems of the Polar Regions (Kaiser, 2010). In the IPY planning document "fine art" was named as a practice through which to communicate with audiences (International Council for Science [ICSU], 2004, p. 15). Education, outreach and communication (EOC) was the basis for the inclusion of art in the IPY programme. However, there was only one project funded in the Antarctic region that had an explicit art element (Krupnik et al., 2011), namely the ITASC ICEPAC project (described in Chapter 5). It is listed as "Art-Science Consortium 417" on the IPY planning chart (Figure 69).

There were other projects that took part during the IPY but were funded through other means. A significant example from the UK was the interdisciplinary symposium *Polar: Fieldwork and Archive Fever* presented through a partnership between The Arts Catalyst, the British Library and the Open University (Dean, 2008). Artists, natural and social scientists, curators and historians participated. The publication *BiPolar* is a legacy and an archive of the ideas and discussion explored (Yusoff, 2008). In part, the project was conceptualised as "an exploration of artists' involvement in communicating knowledge and involving a wider public in collective construction of meaning in the context of the Polar Regions" (Triscott, 2008, p. 31).

[167] To date there have been four IPYs: the first in 1881-84; a second in 1932-33; a third in 1957-58, widely known as the IGY, or International Geophysical Year; and the fourth in 2007-08 (Kaiser, 2010, pp. 6-7).

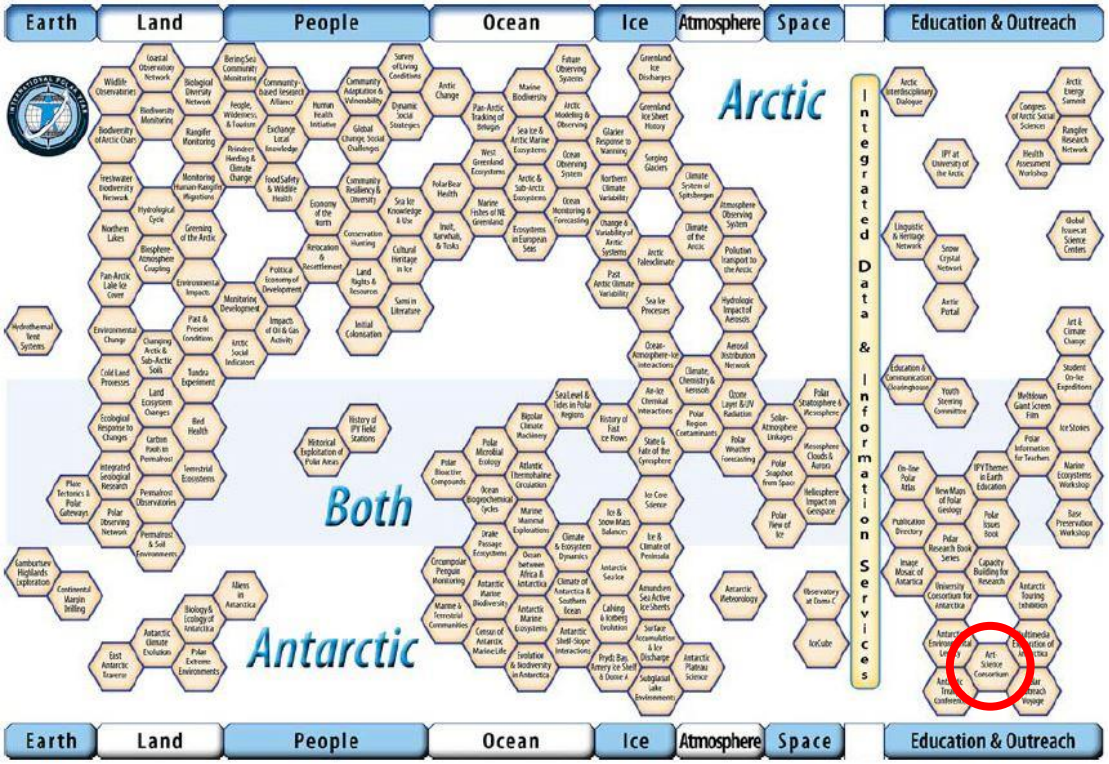

Figure 69. *IPY Planning Chart*. There were several iterations of the planning chart. The version seen here is the final plan of projects with IPY Joint Committee endorsement (Salmon et al., 2011, p. 266).

Returning to the funded IPY programme, one of the interview participants who had been involved in the coordination of the IPY outreach programme described how, although "the scientific projects were encouraged to have an artistic element to them[...] there was no budget...making it not as successful as it might have been" (IA16). Nevertheless, the IPY evaluation specifically acknowledges "the power of multiple perspectives", including that of art (Krupnik et al., 2011, pp. 318-319). Furthermore, the IPY EOC evaluation reported that "artists and musicians want to be actively engaged in science" (Provencher et al., 2011, p. 5), suggesting an interest in transdisciplinary practice, at least on the part of the artists. However, it is also noteworthy that the education and outreach resource produced as a legacy of the IPY does not include any examples of Antarctic-specific art, or Antarctic art and science, projects (Kaiser, 2010).[168]

Although transdisciplinary approaches in research and EOC are proven to be effective (Ewel, 2001; Sörlin, 2012; Stevens & O'Connor, 2015), and despite being recognised as having much to contribute, artists remain underrepresented in convergence and transdisciplinary practices (NRC, 2014a; 2014b). Those working in transdisciplinary ways are excited about the possibilities, but they report difficulties in creating and sustaining environments that enable this way of working (NRC, 2014a, p. vii). Some of the organisational, cultural, and structural elements that enable successful convergence are commitment and leadership at all levels; flexible funding sources; an inclusive and mutually respectful culture; dynamic interactions with multiple partners and institutions; and opportunities to share and become conversant with each other's areas of knowledge (NRC, 2014a, p. 25). These are the same factors that impact on the success of Antarctic art programmes and artist/scientist collaborations, as discussed in Chapters 4 and 7. The involvement of artists in truly transdisciplinary

[168] The publication was under review in 2020 therefore examples of Antarctic-focussed art/science collaborations may appear in the second edition.

Antarctic research is rare, but for those NAPs that have supported, or do support artists, a requirement for artists to respond to and communicate science is still strong.

9.6 NAP science communication and public engagement agendas

Education and outreach is the most recent framing for state-supported Antarctic arts activity. NAPs often cite audience engagement and science communication as the rationale for supporting artists (Antarctica New Zealand, 2020; AAD, 2017a; Germany, 2007; NSF, 2000; Republic of Korea, 2006; Uruguay, 2015). This emphasis aligns with principle Article 6.1a of the Madrid Protocol (1991). Attendees at ATCMs[169] worked together to implement Article 6.1a as a component of IPY 2007-08, and they have sought to continue this momentum since (Xavier, Mateev, Capper, Wilmotte, & Walton, 2018). In 2015, they formed an ATS Intersessional Contact Group to advance the development of EOC initiatives. EOC is often the rationale behind NAP supported art projects and programmes (Argentina, 2015; Bulgaria & Chile, 2016; Uruguay, 2015). Selection criteria for some NAP art programmes has often required artists to demonstrate a proven ability to reach and engage audiences, and stipulated that they communicate science activities through their work (IOR21; IO24; IO30). Responses from those who worked, or who have worked, for NAPs show that the ability of an artist to reach a new or wider audience is of primary interest (IOR21; IO23; IO24). An artist's track record in securing a national and international audience for their work is a factor that some organisations take into consideration (IO30). For some participants, public understanding of Antarctic science was considered to be one of the most important dimensions of art's engagement function.[170] One organisation representative exclaimed that "the art must sell the science" (IO23).

Both scientists and artists suggested that communicating with the public is not a strength of many scientists,[171] whereas it is a skill many artists possess. Artists were called "translators", "messengers", "educators" and "storytellers".[172] Two natural scientists interviewed, who had employed artists within their field team, valued artists' ability to convey a science message in an engaging form (IR39; IR27). Another who responded via the online survey commented,

> *Before I went to Antarctica I saw no value in artists and writers' programmes...After my first visit I thought artists had more right than me to be there since they could communicate what Antarctica is better than I. (SP2)*

Art was considered more relatable to a public audience than science[173]:

> *Our own words and ways of explaining are technical and mathematical, it is the artists [who…] add to the depth and sensuality of the scientific message. (IR36)*

It is notable that some organisations manage their Antarctic art programme through their public relations, media and communications function, reflecting and reinforcing the idea that the value of art is defined in public engagement terms. Some suggested that a reason for this may be that taxpayer funded Antarctic research programmes and organisations have an obligation to report back to the public (IR10; IC20; IR37; IR39; IR42). As a scientist explained,

[169] Antarctic Treaty Consultative Parties, Observers and Expert Groups.
[170] IA12; IR15; IA16; IO23; IO24; IO30; IA47: SP20; SP85; SP92.
[171] IA5; IA19; IC20; IR27; IA38; IR39; IR40; IA43; IA45.
[172] ESP1; IC4; IA9; IO26; IA28; IO30; IR31; IA38; IA41; IA44; SP9; SP19.
[173] IA6; IA16; IA25; IR39; IA41; IA43; IA47; ICA48; IC50; SP41.

> *For good science to be done in Antarctica it requires the consent and enabling of the wider population of citizens of the world...it is very hard for us scientists by ourselves to give back to the citizens a sense of the value of the science; a sense of the difficulty of the science; and finally, a sense of why the science needs to be done. (IR36)*

Artists can help fulfil this reporting duty whilst serving other strategic environmental and political agendas (IO23; IO24; IO30). One programme manager described the relationship thus,

> *Part of our core business is for people to understand about Antarctica, to value it and then to be supportive of protecting it, so artists going to Antarctica and then being able to communicate their experiences and reach a wider audience are doing something we can't do on our own. (IO30)*

Although artists were considered by many to be well-placed to contribute to public outreach and science communication,[174] this requirement was not without criticism (IOR21; ICA14; IA33; IO49). Commenting on a change in emphasis towards science communication, a former programme manager observed that,

> *It would seem to be a decision made by a senior executive who has failed to understand the value the [art] programme was delivering. This is entirely the wrong way to treat it, as though arts and humanities are simply a public relations arm to deal with science. (IOR21)*

Those programmes that appear to have a stronger emphasis on science and public relations, rather than seeing the artists' work as an important knowledge-generating inquiry in its own right, were criticised (IR10; IOR21; IA28; IA33). Such programmes were perceived to be operating as "marketing for the organisation" (IA28), "bordering on corporate art" (IR10), rather than striving for the art to be a serious contribution to the knowledge, culture and understanding of Antarctica:

> *[Artists] should be there, but not as a vehicle to promote organisations, but as an important way to enquire what it is that we know and understand...And it's not necessarily done appropriately by allying or aligning art to the promotional arm of organisations...it's somewhat of an insult to an artist. (IA33)*

The public engagement objectives to which art is frequently aligned do not properly acknowledge art as critical inquiry in its own right. The alignment can obscure the recognition of art as a valuable contributor to "the quantum of knowledge and understanding of Antarctica" (IA33). For some participants the critical inquiry of artists, and the contribution art makes to knowledge and culture, is vital and a high priority (IOR21; IA33; IO46). As Gaut reminds us,

> *We reveal too much of ourselves and our culture through our art-making for art not to be a major source of knowledge. (Gaut, 2003, p. 444).*

As a cultural manifestation of our engagement with the world (Fox, 2008), art is a vessel of knowledge, values, perspectives, ideas and narratives. The value of Antarctic art as a cultural legacy should not be underestimated.

[174] IA5; IR10; IA13; IR15; IA16; IA25; IO26; IA28; IA34; IC35; IA36; IR39; IA41; IA47; SP20; SP85; SP92.

9.7 Constructing perceptions of Antarctica through art

Most people are unlikely to visit Antarctica themselves. Art and imagery are their only ways to see the continent.[175] Hence Glasberg's statement, quoted in the introduction to this thesis, that Antarctica is the most mediated place in the world. Similarly, Leane suggests that "language – in its broadest sense – is key to humanity's relationship with Antarctica" (Leane, 2011a, p. 13). With these observations in mind, art is intimately involved in shaping how Antarctica is culturally constructed, presented and understood. All art and visual representations are selected compositions, they are constructions and fictions, yet these images, and the narratives they relay, define Antarctica and our ideas and understandings of the continent (Glasberg, 2012).

The question of who is constructing images and representations of Antarctica exercised some of the research participants. There was some criticism of the reliance on scientific and base personnel to be the ones producing the images (IA41). Furthermore, two participants who represented Antarctic organisations and Antarctic art practice criticised organisations for sending far more journalists than artists down there (IOA2; IOC8). One organisation representative felt that representations of Antarctica are dominated by documentary and commercial photography. He said it was "extremely important" to have artists involved in constructing the Antarctic imaginary, not just scientists, journalists and the tourism industry (I046). Two artists criticised what they perceived to be a lack of understanding and appreciation of the value of their work (IA33; IA41). One suggested that

> *A very naïve idea that [some] scientists have is that if we get a really beautiful photograph people will know how important Antarctica is...it's just such a disconnect between the role of art and how artists operate, and their need for empowered communication about their work. (IA33)*

As beguiling as unspoiled icescapes are, critically inquiring artists do something more than capture ideas of the beauty of the Antarctic wilderness; they "reframe the questions that we ought to be asking" (IC20). The exhibition where data was collected for this study provides an example of this reframing. The artwork in the exhibition challenged the audiences' preconceptions and what they "liked to think Antarctica is" (EIP2). Audience members were anticipating seeing pristine icy scenes, penguins and glaciers but instead were presented with images exploring aspects of human presence, including identity and misogyny (EIP1; EIP2; EIP4; ESP7). The audience appreciated being shown a side of Antarctica that they had not seen or considered before (EIP2; EIP3; EIP4; EIP5). The work provoked strong emotional responses yet, as discussed in earlier chapters, participants expressed appreciation for being confronted with subject matter they found uncomfortable. They felt it was "important to see this other side" (EIP3). As cited in Chapter 5, an exhibition visitor who felt challenged by some of the work found that their ideas of Antarctica "evolved" as a result (EIP2).

It is worth acknowledging here that, whilst an artwork may represent something of the author's perspective, and the author may, to some extent, direct a viewer's gaze, the viewer also has agency in the exchange (Barthes, 1977). Berger's statement that "we only see what we look at. To look is an act of choice" (Berger, 1974, p. 8), is a reminder that viewing and reading an artwork is not a passive undertaking. Furthermore, audiences bring their own values, experiences, biases, perceptions, and sociocultural and political influences to their readings of art. Each person brings their own "way of seeing" to their engagement and interpretation (Berger, 1974; Hubard, 2008). As Constantino explains, "interpretation is conditioned by prior knowledge...cultural biases or historical consciousness" (Constantino, 2003, p. 78). The audience has an active part to play; there is a

[175] IOA2; IR10; IR15; IA16; IA25; IO26; IO30; IR31; IOA32; IR36; IO49; SP10; SP12; SP15; SP33; SP35; SP38; SP61.

negotiation in the construction of meaning between what the artist presents and what a viewer reads (Barthes, 1977). Beyond an initial appreciation of aesthetic qualities, cognitive engagement with art and construction of meaning can be complex. An audience can engage with an artwork through various sense-making interpretive lenses, drawing on their own knowledge, experience and socio-cultural and political positioning. The artwork creates a space and opportunity for engagement and thought. Ideas, perceptions and understandings of Antarctica are formed through the critical capacities of artists and audiences in making and responding to art.

9.8 Sharing and valuing Antarctic art legacies

For the public to have the opportunity to engage with art, the ideas it contains, and the ideas it may trigger, the work has to be shown and seen. Exhibitions and biennales, museums, archives and published material are all avenues through which public audiences can access and engage with art. In addition to exhibitions and publications, some artists give public talks and run workshops.[176] For others such as O'Connor, discussed earlier in this chapter, public participation is part of their creative process. Dissemination is critical in maximising the public engagement value of art. The artworks, exhibitions and publications provide a stimulus and space for critical engagement with ideas. They are places for sharing knowledge and developing understandings. Two respondents expressed a concern that, in some cases, art may only engage a small and niche audience (ESP9; SP9). However, others viewed art as accessible to a wide range of people, especially those outside of the science community, and those not currently engaged in Antarctic-related matters.[177]

The artwork itself is undoubtedly the most important outcome of an artist's engagement with Antarctica. These objects are a lasting legacy that exist for current and future generations to inquire into and engage with ideas and debates concerning Antarctica (IOR2; IOC11; IC18; IA33). Art is a form of "cultural memory" (IOC11; IO49). Artworks and the published material discussing art reflect the ideas and beliefs of particular moments in human, social, cultural, political and environmental history (IA41). The roots and development of culture, ideas and beliefs can be traced through art. As a mirror of the present and a window into the past, art is an invitation to reflect, question and respond. A critical engagement with art can be a critical engagement with cultural values, and as such it can influence our ideas, actions and decisions moving from today into tomorrow.

Antarctic artworks held and conserved within public collections are secured as a resource in perpetuity. Furthermore, institutions with the space to publicly exhibit artworks from their collection, or loan those artworks to other exhibiting institutions, are able to participate in and position themselves within larger cultural conversations, such as those exploring human relationships with the environment and Antarctica (IA33). The exhibition *Vanishing Ice*, discussed in Chapters 1 and 8, is one such example. Similarly, artists who exhibit their Antarctic work internationally contribute to cultural conversations taking place around the world.

There are a number of Antarctic and cultural institutions that hold Antarctic art in their archives and collections. Over 2500 artworks and 150 artists are represented in SPRI's Polar art collection, which includes work from both Antarctica and the Arctic. Although they are catalogued within broader themed collections, The Center for Art + Environment at the Nevada Museum and Art Gallery holds artists' work and associated documents that have a specific Antarctic focus (The Center for Art +

[176] IA28; IO30; IA34; IA38; IA43; IA44; IA47.
[177] IA6; IA16; IC17; IC20; IO23; IO24; IO26; IO30; IA33; IR36; IA38; IR39; IR40; IA47; ICA48; IC50; SP4; SP11; SP17; SP19; SP41; SP85; SP92.

Environment, 2020). BAS, AAD and Antarctica New Zealand each have a collection of artworks donated by the artists they have supported. All three organisations display pieces from their collection in the corridors, office spaces and meeting rooms of their headquarters. National galleries and museums, geographical societies, and maritime museums house collections containing significant Antarctic artworks, often by nationally and internationally significant artists. Regional art galleries and museums, especially those in cities with significant Antarctic associations, hold Antarctic artworks in their collections. The Tasmanian Museum and Art Gallery (TMAG) and Christchurch Art Gallery/Te Puna o Waiwhetū fall into this category. However, neither institution categorises their artworks as an Antarctic collection per se. Acquisition decisions may focus on an artwork in relation to an artist's broader body of work and practice, or in relation to local, regional or national cultural narratives that are a curatorial focus of an institution. This said, TMAG has a large permanent exhibition, *Islands to Ice,* dedicated to the natural and cultural history of the Southern Ocean and Antarctica, which includes a display area for art. The accompanying interpretation panel states that "in recent years there has been a recognition that the arts have something special to say about the region […TMAG] recognises the enormous contribution the humanities make in our understanding of the Antarctic" (Tasmanian Museum and Art Gallery [TMAG], 2019). For five years until 2008 Christchurch Art Gallery/Te Puna o Waiwhetū had a sponsored gallery space devoted to Antarctic art, the Tait Electronics Antarctica Gallery (Jones, 2011). Tim Jones, the gallery's librarian and archivist, describes, "the commitment to Antarctic art being quietly dropped" in 2008 when non-Antarctic exhibitions were programmed in the space, and the word "Antarctica" was removed from signage (Jones, 2011, p. 59). The curatorial preference was for contextualising individual Antarctic artworks from the collection within the context of an artists' other work or within wider-themed exhibitions (Jones, 2011). For example, the 2020-2022 exhibition *Te Wheke: Pathways Across Oceania* includes *Untitled (Ross Ice Shelf, Antarctica) 2005,* a video piece by Connie Samaras, a participant in the NSF Antarctic art programme. The exhibition situated "Ōtautahi Christchurch as a connective point within a vast liquid continent" (Randerson, 2020), through exploring stories of "migration, connection and belonging" (Christchurch Art Gallery / Te Puna o Waiwhetū, 2020).

Whilst several art programme managers and cultural professionals expressed the view that the artworks are a culturally valuable outcome and legacy of Antarctic art programmes, and that collections of this work have long term cultural value,[178] there was also concern that these legacies were not always appropriately respected. One organisation representative reported that their Antarctic art collection had suffered neglect. Until a recent change in management, many of the artworks in their care had been inappropriately stored for several years with no consideration for their long-term conservation. Another programme manager reported that,

> *It doesn't feel like we value [the artwork], we just go, "Oh, thanks very much. You've presented us with the thing we asked for and now I'm going to put it in a cupboard"...That's how it can feel...we ought to be a bit more professionalised about it. (IOC11)*

A small number of participants, including a former Antarctic art programme manager, remarked upon the lack of support available for artists on their return from Antarctica (IC20; IOR21; IC35). The former programme manager commented that there was "inadequate recognition from the organisations involved that money was needed to help artists exhibit and publish" (IOR21). Similarly, one artist felt that, considering the cost of supporting artists to work in Antarctica, the national arts funding organisation that supported her could have created more opportunities for the Antarctic artists alumni to share their experiences on their return (A19). Others commented that compared to

[178] IOR1; IOC8; IO24; IC29; IA33; IC35.

the significant financial investment in science programmes, and considering that opportunities for artists in Antarctica are predominantly unpaid, a relatively small amount of financial support is required to support the artists to complete and share their work through exhibitions and publications (IOR21; IR27; IC35). However, they acknowledged that finding and securing funding for this can be very difficult (IOR21; IA27; IC35); two advocated for improvement to the funding models for Antarctic art programmes, to ensure the greatest public benefit through wide exposure of the artists' work (IOR21; IC35).

One way that Antarctic organisations can promote the artists they have supported is through publishing material on their website or in print. The AAD, Antarctica New Zealand, SPRI and the NSF, each maintain an online record of the artists that they have supported, often with links to the artists' websites (Antarctica New Zealand, 2017; AAD, 2017b; NSF, 2016). In 1993 and 2002 respectively, the NSF and Antarctica New Zealand published compilations briefly detailing the artists they had supported (Antarctica New Zealand, 2002; NSF, 1993). NAPs that support artists on a more infrequent basis sometimes store press stories of artists' projects on their website (AWI], 2005b; Bär, 2015; BAS, 2003; 2004, 2019b). However, NAPs that no longer support an art programme, such as DNA and BAS, have erased from their organisation's website information about their former art programme and their artists alumni. Similarly, Theme Media no longer hosts a website detailing their *Polar Arts Program* alumni list. Andrea Juan, who ran the DNA art programme, established the *Sur Polar* artists' network and website independent of the DNA (Juan, 2018). Although the *Sur Polar* network is not restricted to artists who have worked in Antarctica, all the artists who participated in the DNA art programme are included. Further, Juan's series of exhibition catalogues, which are available online through the *Sur Polar* website (Juan 2017), include the artists who participated in the DNA art programme. *Landscapes of Exploration* details BAS's artists and their work (Wells, 2012). The physical archive at BAS also hold documents and reports related to their art programme (BAS, 2005a, 2005b, n.d.).

Outside of institutions' alumni lists, individual museum and gallery collection records, and a small number of publications that chart some of the chronological history and artworks from some nations, there is no one place or resource that collates a list of Antarctic artists and their work. This is an area for further work identified in the concluding chapter. The creation of an annual index of Antarctic artists within a research journal was an idea suggested by one participant (IC20). The production of a high quality publication representing the international body of Antarctic art was another (IO49). These would be useful resources to "see what's been achieved so far […and] the 'what next?' could emerge from that" (IC20). More research is needed to generate an inventory to understand what has been created, which artworks are held in public collections, and where. The availability of such a resource would test the perception that "there is not much Antarctic art…either historic or contemporary" (IOC8).

Although Antarctic art is preserved in national institutions, and these artworks are part of a nation's cultural heritage, I would argue that Antarctic art is also world cultural heritage. The United Nations Educational, Scientific and Cultural Organisations (UNESCO) states that,

> *Heritage is our legacy from the past, what we live with today, and what we pass on to future generations. Our cultural and natural heritage are both irreplaceable sources of life and inspiration...World Heritage sites belong to all peoples of the world, irrespective of the territory on which they are located. (United Nations Educational Scientific and Cultural Organisation [UNESCO], 2020, p. 1)*

Although, as discussed in Chapter 6, national agendas are central to state interests and activities in Antarctica, it is also a region of the world conceptualised as an international commons (Buck, 1998). As a shared space, belonging to no one and belonging to all, Antarctica's cultural heritage is international. In this context, Antarctic art reflects more than a national narrative, it is part of an international world heritage. For this reason the artworks deserve to be shared and seen as a collective representation of Antarctic culture. An online resource would be an obvious solution, and one that is discussed in the next chapter.

9.9 Concluding observations

Since humans learn and communicate primarily through visual means (Tuan, 2012), visual art and the imagery we create influences our perceptions, emotional connections, knowledge and understandings of Antarctica. Art that communicates the beauty of the continent's wilderness can give pleasure and inspire awe. Although such responses can to some extent support environmental conservation campaigns, they can also increase the desire people have to visit, which unavoidably has an environmental impact. Beautiful icescapes and literal representations shape our understandings only so far. Artists that operate using metaphor and critical inquiry create spaces for audiences to construct meanings, feel strong emotions, and have their perceptions expanded. Influential art operates on an emotional *and* a cognitive level.

In an era of anthropogenic environmental change, making policy and taking action to address global problems requires people to think and feel that the situation is urgent and cannot be ignored. The additional effort required to redesign ways of living and change behaviours must be seen as preferable to the consequences of inaction. Occupying a domain of wisdom and empathy, and bridging the gap between scientific knowledge and political action, art can help people understand information and feel a connection required to bring about change. In this context transdisciplinary art and science research and public engagement practices are proven to be successful.

Although science is the dominant knowledge framework in Antarctic operations and human engagement with the continent, and while art can communicate science and advance public understanding and engagement with science, art should be recognised and valued as a source of knowledge and a cultural asset in its own right. Reflecting the values, attitudes, and concerns of its time art has a substantial role in shaping how we see and understand Antarctica and the wider world now and as we move into the future. Furthermore, as a form of cultural memory art is a valuable cultural legacy, a resource and a source of knowledge for current and future generations.

10 A continent for art? Conclusions and recommendations

Art has intrinsic value as a fundamental dimension of human culture in Antarctica. It also serves important instrumental purposes as a mode of inquiry, a source of knowledge and as a vehicle for communication and public engagement. In this study I have examined the value of contemporary visual artists working in Antarctica. The literature review complements and builds on the bibliographic research of Leane (2001) and Fox (2005b), and contributes a step towards fulfilling Elzinga's call for an annotated bibliography including Antarctic visual, literary and performing arts (Elzinga, 2016). The international and contemporary focus of my research extends the work of scholars including Andrews (2007), Fox (2009) and Wells (2012). This contributes significantly to addressing the absence of an international perspective in critical examinations of Antarctic art and art programmes that Walton and Pearson (2006), and Elzinga (2016) identify. My compilation of an international artist chronology substantially develops what is known about artists' presence in Antarctica. It provides the most comprehensive record to date enabling understanding of artist numbers, gender representation, and their cultural diversity. Through looking at the manifestations and applications of value concepts surrounding the making of Antarctic art, the study adds an important perspective that has been missing from Antarctic values scholarship (Engelbertz, Liggett, & Steel, 2013a; Liggett & Hemmings, 2013). My examination has identified perceptions of artists and their work, and discerned some of the important contributions to knowledge and understandings of Antarctica that artists have provided. I have highlighted factors that support artists' critical engagements with the continent and important considerations for the future of artists working in Antarctica as well as factors that create barriers in carrying out this work. Importantly, the research has revealed the strong influence of key Antarctic values that permeate the context in which artists operate.

10.1 The influence of Antarctic values

A range of values and principles underpin perceptions of human activity on the continent. They play a significant role in controlling artists' access to the continent, and they influence how the artists' actions and their artworks are perceived and judged. The values can be grouped into four categories: political, interpersonal, environmental and knowledge. There is substantial overlap with several or all of them in operation simultaneously.

Politically Antarctica is a shared space. State-enabled human activity in Antarctica has a geopolitical basis, predominantly nationalistic in character and motivation, which raises questions about what values and whose values are being promoted and for what purposes. Yet international cooperation is an Antarctic meta-principle. Antarctic art programmes and their artists can cultivate and promote a nation's Antarctic identity (ICA48) or actively instigate international cooperation (Juan, 2012; Resolution 5, 2013). Interpersonally, there is a distaste for pursuits perceived to be egocentric, fame-focussed or having little purpose beyond individual gain. Visiting and working in Antarctica is considered an enormous privilege with which comes a responsibility towards others, especially the public. In this regard, art has a significant role in public engagement. This sense of responsibility extends to human relationships with the Antarctic environment. Concepts of wilderness and aesthetic values exert a powerful influence on the production of imagery and public perceptions of Antarctica. Artists deemed to violate environmental values and codes of behaviour are judged harshly. Reflecting the most pressing issue of the century, climate change urgencies are prevalent in Antarctic scientific and artistic discourses. Many of those working in Antarctica recognise themselves

as part of an interconnected dynamic earth system, within which humans are having a devastating effect. Antarctica is a sentinel - a source of knowledge of planetary climate history and forecasted futures. Described in policy as a continent devoted to science, the focus of state-supported human activity across the continent is the pursuit of knowledge, with natural and physical science dominant in this.

This study has demonstrated that Antarctic artists' work and perceptions of the value of their work often reflect these four value themes. However, a major finding of this study is that science is not the only valued source of knowledge; creation of art and lived-world experiential knowledge are important contributors to understandings of Antarctica. Multiple ways of inquiring about and describing Antarctica are not only possible, they are essential. For many, art has equal value to science and it is vital for human understanding and communication of the multiple dimensions of Antarctica's natural and cultural environments.

10.2 Reflecting on the value of artists and their work

An artists' ability to promote wilderness and aesthetic values has been a rationale for supporting their presence (Resolution 2, 1996; Resolution 5, 2013). However, this can eclipse a more critically inquiring contribution that artists have to offer. Perpetuating the idea of Antarctica as a pristine icy wilderness develops understandings of Antarctica only so far. Such imagery may even increase the pressure on a fragile environment by fuelling a public desire to visit. I have shown that an important counterbalance to these images are those that challenge viewers to look beyond the myth. Critically inquiring artists can draw attention to some of the environmental contradictions and tensions inherent in human presence.

The values people associate with Antarctica may influence their perceptions of artists and their work but, significantly, art can influence people's perceptions of Antarctica. There is a dynamic relationship between an artwork and a viewer. Artists and their work have the ability to examine, challenge and shift perspectives, influencing how viewers think and feel about Antarctica and what we are doing there. The combination of the expression of ideas through art, and the viewers' interpretations of these artworks, is a site of active sense-making. This is a space where representations and understandings conjoin in the construction of meaning. Imagery has a strong influence on our perceptions, emotional connections, knowledge and understandings of Antarctica. As art operates on an emotional *and* a cognitive level, it creates a space for viewers to think, feel and have their perceptions confirmed, challenged or expanded. Art is created to be seen and read. It is a space for sharing and stimulating ideas. Art can arouse curiosity, invite contemplation, provide pleasure and inspire feelings of awe and wonder. It also has disruptive abilities and can provoke feelings of disgust, anger and fear. The disrupting effect of confronting images and ideas can challenge complacency. Artworks that contest our perceptions, or that require us to make sense of what we are viewing, provide an opportunity for our understandings to be stretched beyond a surface aesthetic appreciation to find deeper meanings. The ability of art to engage emotions and to stimulate critical thought can provide a nexus between scientific knowledge, environmental awareness and public response. Art and the humanities are a vital bridge between knowledge, policy and action.

Considering the communicative abilities of art it is not surprising that in the NAP context the value of art has often been aligned with an EOC function. As the dominant framework in Antarctic research, art is often married to a science-based agenda. Artists' work can contribute to scientific inquiry and communication, and the advantages of transdisciplinary research models are proven. Nevertheless,

art has value beyond science. I have demonstrated clearly that artists' analytical inquiries add significantly to our knowledge and understandings of, and engagement with, the cultural, socio-political *and* environmental dimensions of Antarctica. As a form of critical inquiry, cultural production, and communication, art should not be confined to a focus on science, as this limits its potential. Outside of the Antarctic context art engages with a dazzling range of subjects, questions, and ideas; it should have the same liberty in the NAP-supported Antarctic research context, as the Antarctic space is multi-dimensional. Artists have a role in examining the many dimensions of Antarctica and prompting viewers to critically consider these. The range of themes discussed in this thesis represents a small fraction of those found in Antarctic art. The variety of subjects that artists have engaged with demonstrates that arts-based inquiry can contribute a wealth of interpretations and critiques. As a vehicle of communication and public engagement it is appropriate that artists working in Antarctica explore and contribute to cultural and political discourse. I argue strongly that descriptions of the value of Antarctic art need to be expanded to reflect the breadth and depth of the contribution that artists provide. Furthermore, my research results allow a strong case to be made for art to be recognised as a necessary research endeavour of equal validity to that of science-based inquiry.

As a cultural product, art reflects the many and varied values, attitudes, and concerns of the era in which it is created. In the Antarctic context, therefore, it has a substantial role to play in representing and shaping how Antarctica is seen and understood in the present moment. Artists contribute to the construction of Antarctic culture. In doing so they create space for us to reflect and question the present, with the potential of influencing our thoughts and actions. As the body of Antarctic artwork grows, it has a considerable value as a cultural legacy, enabling us to look into the past to better understand the present and consider the future. The artworks and associated publications held in archives, galleries, libraries and other institutional collections are Antarctica's cultural memory. Art is a valuable resource and source of knowledge for current and future generations. Exhibition, analysis and interpretation of these works offer a vital contribution to critical discourse. In a cultural, philosophical and political sense, these works show us where we have been whilst enabling us to consider where we are and where we want to be.

10.3 Shaping the future of artists in Antarctica

There is a tension between the search for knowledge and the impact of collecting data. Artists and researchers who are conscious of the environmental consequence of their travel to and presence in Antarctica experience a conflict of values. While recognising these contradictions, they are also motivated to pursue their research to add to the body of knowledge that, in turn, has the potential to influence public opinion and political decision making concerning how we live in the world. Some data can only be collected through being physically present. Seeing, recording and interpreting Antarctica in person is a necessity for many artistic inquiries. In much Antarctic art, its creation or temporary installation in Antarctica is a vital element in the construction of meaning. Experiential knowledge, such as cognitive engagement through physical and sensory experience, and deriving ideas from interactions with people and places, are some of the routes to knowledge where presence is required. Engagements with and explorations of human presence and construction of communities often require direct observation (O'Reilly & Salazar, 2017; Salazar, 2013a). There should always be a role for artists to study our presence, activity and the cultures we create in Antarctica, until such time that we are no longer visiting, living or working on the continent.

I am convinced that art and artists' presence must be recognised for their contribution to knowledge as research-based critical inquiry. This requires a shift in emphasis in the language and framing of Antarctic research commissioning to create space for multiple and transdisciplinary research practices that support and value art. Acknowledging that artists work in diverse ways, and have diverse cultural and political concerns and interests, they should be enabled and supported to engage critically with any and all of Antarctica's dimensions.

To ensure artists' work is recognised as serious research and supported as such, a funded programme with an openly advertised proposal-based application system is recommended. A transparent selection process with selection by peer review via a panel of Antarctic and arts professionals is preferable to informal invitation. While recognising that artists must design their research proposal fully cognisant of time constraints and access limitations, equally the availability of access and the duration of the research visit should correspond with the artist's research requirements. Allowing enough time for more than a superficial engagement is essential, with the potential for a project to be conducted over multiple seasons, if required, to achieve depth in understanding and inquiry.

As I argue in this thesis, artists should be enabled to pursue their inquiry either as a discrete project or as part of a transdisciplinary research collaboration. Antarctic research opportunities and funding structures should be configured to encourage artists' involvement in such collaborations. Very few such projects exist in Antarctic research. There is tremendous scope for development in this area. Support for transdisciplinary proposals needs to be built into research programmes and funding streams. To date most Antarctic opportunities for artists have been unfunded. Sources of research funding are needed that support arts-based research. Similarly, resources are required to support the dissemination of artists' work through exhibition and publication, thus maximising the investment of supporting an artist through ensuring that their ideas are shared and that they contribute to the knowledge and cultural legacy of Antarctica.

Considering the dominance of the natural and physical sciences in Antarctic research, the recommendations above are ambitious and require significant investment and leadership to bring about change. Artists can individually and collectively demonstrate and champion the worth of their work but ultimately the gatekeepers to Antarctica, those in leadership roles in research institutions and in Antarctic organisations, have the power to enable artists' access to the continent. They have the resources required to create openings and establish support for art-based Antarctic research and critical inquiry. Such opportunities and the continuation of Antarctic art programmes require the commitment of organisational leaders and personnel to understand, articulate, and defend the value of art. Moreover, to ensure longevity, space for art-based research and inquiry must be embedded within an organisation's vision, mission, strategies and policies. Without organisational commitment art programmes are exceptionally vulnerable. Opportunities for artists to work in Antarctica are scarce and have reduced in recent years. As the predominant access providers, NAPs, the tourism industry, Antarctic organisations and research institutions have the ability, and I would argue a duty, to create space for arts-based research. Resolution 2 (1996) and Resolution 5 (2013) go some way to encourage NAPs to support artists, yet out of the 30 NAPs currently operating in Antarctica only two of them (the USA and Australia) have a programme that is designed specifically to support artists.

Some of the most significant findings of the study stem from the chronology. There was a welcome increase in the number and cultural diversity of artists after the turn of the 21st century but there has been a dramatic decline on both counts since 2017. These recent declines are extremely concerning as they are, in effect, a silencing of Antarctic cultural representation. Barely any new art-based research is being developed. This is the beginning of a lacuna, which, if left unaddressed, will

result in a significant void in Antarctic cultural history and heritage (Jackson, 2019). A culturally diverse alumni provides a range of philosophical perspectives and cultural interpretations. Antarctica's cultural and political heritage, and its environmental interconnection with the rest of the planet, has relevance to all nations and peoples of the world. Increasing the cultural diversity of artistic engagement with Antarctica is vital and international cooperation could facilitate this. By the end of 2016 only three annual Antarctic programmes open to artists remained in operation, with only one of these open to international applicants.[179] A small number of internationally open programmes existed in years past; there is tremendous scope for reviving and cultivating an international, or a supranational, emphasis in Antarctic art programmes. The ATS foundational values and ATCM Resolution 5 (2013) provide a conceptual and policy basis for the development of transnational cooperative art projects. The most worrying finding is the very low number of black and Indigenous artists in the Antarctic artists alumni. The operations of whiteness and white privilege in the access to opportunities for artists must be scrutinised and revised to ensure equity. Further research is required to understand the socio-cultural and institutional factors involved to inform how inequalities are addressed.

In an era of a rapidly changing global climate where human activity threatens local and global ecological systems, the primary concern for all human presence in Antarctica has to be its environmental impact. Therefore, proposals for any research activity, including those of artists, must be designed and assessed in relation to environmental considerations. Extending beyond the environmental protection requirements of the ATS, and in line with whole earth perspectives, I strongly advocate that research activity should epitomise an ecocentric values-based approach not an anthropocentric one. I am convinced that a shift in values and human activity in Antarctica, and the wider world, is required. As human beings living in an interconnected interdependent world, we need to move away from an anthropocentric worldview to an ecocentric one in which the planetary ecosystem as a whole informs policy, decision-making and the way we live our lives, including the making of art. This reflects the shifts that are already taking place in health research (Deem, Lane-deGraaf, & Rayhel, 2019; Lerner & Berg, 2017; Rabinowitz, Pappaioanou, Bardosh, & Conti, 2018; The Lancet Planetary Health, 2017).[180]

I have demonstrated the value of artists working in Antarctica yet there has been a decline in opportunities open to artists. My recommendations for supporting the development of arts-based research practice beyond the period of Covid-19 restrictions are:

- As a matter of urgency NAPs and tourism operators should be exhorted to provide space, time and support for arts-based research
- State Antarctic research strategies and priorities should be developed and implemented that recognise, encourage and support transdisciplinary research
- To support diversity and reflect international cooperation, Antarctic art programmes and opportunities should be created that are open to international applicants

[179] With the caveat that applicants had to be a citizen of one of the 12 original Treaty signatory states.

[180] The Covid-19 pandemic is an illustration of the impact of problematic proximities between species that enable transmission of deadly pathogens. Several Antarctic research programmes in the 2020/21 season were reduced to minimise the possibility of the virus reaching the continent and risking the health of personnel and wildlife. Despite precautions the virus did reach a Chilean research station in December 2020. The impact on wildlife and the operation of future research programmes is currently unknown.

10.4 Areas for further work and research

As noted in Chapter 3, the cultural diversity of the Antarctic artists alumni is based on the artists' nationality and is therefore a broad-brush representation of the true picture. A detailed understanding of the richness of the diversity of the alumni requires further research. There is substantial scope for further examinations of Antarctic art from South American, Asian and African perspectives. For reasons outlined in Chapter 2, there was a demographic bias in participation, with strong representation from North America, Europe and Oceania, and significantly less from South America, Asia and Africa. As states with Antarctic gateway cities, the connections with Antarctica that South Africa, Argentina and Chile have are important facets of Antarctic cultural heritage and identity. Not only have national and international artists accessed Antarctica via the gateway cities of each of the states but, in the last decade, Argentina and Chile have supported artists through a formal NAP art programme. Several other South American states hosted artists within the same period. For a comprehensive account of Antarctic international cultural heritage I recommend the development of an international collaboration of arts and humanities scholars, representative of the states that have supported Antarctic art, to undertake a detailed analysis of the output and the various cultural contexts of Antarctic art production. A socio-historic analysis with a 21st century focus would also reveal how ideas and cultural concerns have changed over time; this is a research area that my work touched on but was beyond the scope of this thesis to explore further. A thorough socio-historic analysis would allow examination of the convergence and divergence of ideas, concerns and values across cultures.

The Antarctic visual art literature, which mostly comprises publications discussing individual artist's Antarctic work or curated exhibitions, with a comparatively small number of broader or issue-focussed critical analyses, has notable gaps. I echo Elzinga's observation that a comparative review of each the annual NAP art programmes would be a valuable resource. Currently there is only one such publication, *Landscapes of Exploration* (Wells, 2012), which charts the former BAS art programme. Missing are contemporary reviews of the annual Antarctic art programmes of Australia, New Zealand, the US, and Argentina. The *Antarctic Artists and Writers Collective* has begun the work of collating and documenting the output and contributions of the US NSF *Antarctic Artists and Writers Program* in an online form (AAWC, 2020). There are some articles and dissertations that examine Antarctica New Zealand's art programme (Jones, 2011; McArthur, 2013; Shepherd, 2015; Taylor, 2009), and the exhibitions resulting from Argentina's DNA art programme are recorded in the series of *Sur Polar* catalogues (Juan, 2017). However, a series of publications charting each of the NAP programmes would be a significant addition to the body of knowledge.

Currently, there is no central resource that provides a comprehensive list of Antarctic artists and their work. The data I have collected provide a sound basis for the development of such a resource. Taking inspiration from Robert Headland's tremendous work, *A Chronology of Antarctic Exploration* (2009), and his observation that Antarctica is "probably the only continental part of the Earth where such a compilation remains practicable" (Headland, 2009, p. 9), I propose the creation of an online open-access resource that combines the international artist chronology, a catalogue of artists' work (with the required permissions), links to public collections of Antarctic art and an annotated bibliography. I am convinced that as an area for further work this would be a substantial contribution to knowledge and a valuable cultural legacy in the interest of Antarctic and world heritage. An ideal host for such a resource would be a university or research institute noted for its Antarctic research record and capabilities, especially in the field of Antarctic humanities and social science. Alternatively a cultural institution, a museum, gallery, heritage organisation or archive, with a specialism that the resource would complement could also be a suitable host. A third option is a

stand-alone resource that could be hyperlinked to other resource repositories such as the SCAR database portal (SCAR, 2020b). To maximise accessibility, language options would need to be considered. A case can be made for several options. Although historically a majority of Antarctic art has originated from English-speaking artists and nations, since the turn of the 21st century a significant number of artists from Spanish-speaking nations have joined the alumni. This suggests a text translation capability option within the resource should be provided in at least these two languages. If mirroring the language provision in documents of Antarctic governance is taken into consideration then translation into French and Russian would be required; and considering the growth of Asian nations' investment in Antarctic research, it would also be appropriate to provide translation into Mandarin.

My research has determined which artists have worked in Antarctica, but not where in Antarctica they have worked. Further research is needed in this area. Collating geographical location data to provide a detailed understanding of where each artist has worked would add a significant and illuminating dimension to the chronology of artists' presence in Antarctica. I advocate mapping and analysing artists' geographical reach in relation to the Antarctic conservation biogeographic regions and environmental domains (Morgan, Barker, Briggs, Price, & Keys, 2007; Terauds & Lee, 2016) in order to understand where artists have travelled, what they have investigated, and what remains unexplored. Furthermore, I recommend extending the mapping to include the sub-Antarctic islands and the Southern Ocean to mirror the area of the CAMLR Convention and to complement the geographical parameters of Headland's chronology. Reviews of the South Georgia Heritage Trust (SGHT) artist residency at the Grytviken whaling station heritage site (Reaper, 2020), the 1989 *Art in the Subantarctic* voyage of 11 artists to Auckland Island (Godman, 1993), and the work of artists supported through the Enderby Trust Scholarship (Heritage Expeditions, 2015) are potential starting points. However, as the various sub-Antarctic islands have cultural heritage and significance for a range of Indigenous and settler communities around the world, this diverse cultural context lends itself to a partnership-based international research project in which multiple perspectives and knowledges are represented.

In summary, my recommendations for further research are:

- Develop the chronological record and analysis of Antarctic art through an international collaboration of humanities scholars representative of states that have supported Antarctic art
- Collate a publication, or series of publications, charting each of the NAP art programmes
- Develop an online resource that catalogues the international artist chronology, Antarctic artworks, and an annotated bibliography
- Extend the details of the artist chronology to include locations visited and topics explored
- Extend the scope of the artist chronology to include the Sub-Antarctic region

10.5 Closing remarks

Artists' presence in Antarctica has value that can be defined in multiple ways. Artists contribute to our understandings of the many cultural, environmental and political dimensions of Antarctica. They can challenge perceptions, stimulate thinking, develop ideas, shape values, and influence action. Yet, the focus on values emphasises and reiterates the environmental tensions involved in human presence on the continent. Although in the short term the level of human presence and ability to conduct research in Antarctica has been impacted by the Covid-19 pandemic, the infrastructure and research station developments that many states are currently implementing indicate a research-rich

future for years to come. In this context, artists and humanities scholars have a vital and continuing role to play in extending our understandings of the many dimensions of Antarctica and Antarctic culture in relation to the wider world.

Entering into the third decade of the 21st century during an era of escalating environmental instability, it is timely to reflexively and collectively question our values and our actions. In facing and responding to the challenges that confront us now, and in anticipation of those that lie ahead, it is appropriate to re-emphasise Fox's observation that "artists have never been so important" (Fox, 2018). While art is not a panacea, as a mode of critical inquiry and communication it has a significant role, with and alongside science and other ways of knowing, in enabling us to notice and to question, and to deepen our understanding of our interconnection and interdependence with the planet as a whole.

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Appendix 1 Information sheet and consent form

UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

Department: Gateway Antarctica
Telephone: +64 33695953
Email: adele.jackson@pg.canterbury.ac.nz

22 March 2018

Information Sheet Interviews

PhD Research Project: 'The Value of Artists Working in Antarctica'

Project description

Adele Jackson, a PhD candidate with Gateway Antarctica, is conducting a research study exploring the value of artists working in Antarctica.

A number of National Antarctic Programmes and other Antarctic organisations support artists to travel to Antarctica and produce new creative work in response to their experiences. Whilst there are publications documenting historic and contemporary Antarctic artwork and exhibitions, few provide a critical analysis of the value of artists working in Antarctica.

Organisations that support Antarctic artist residencies often do so to increase public engagement and understanding of Antarctica through the presentation of the resulting artwork, however no research has been done to explore the breadth and depth of impact the work may have. This research study sets out to address this gap. In seeking to answer the question 'what is the value of artists working in Antarctica?' the researcher will conduct interviews with artists, curators and arts professionals, Antarctic programme managers, Antarctic researchers and audiences.

Participating in the research

If you choose to take part in this study, your involvement in this project will be to take part in an interview which will be conducted either face-to-face, by phone, Skype or written responses depending on practicality and your preference. For spoken interviews you will be given a copy of the interview questions in advance of the interview date to give you time to consider your views. The interview will last approximately 30-45 minutes and will be audio recorded to aid transcription and ensure accurate representation of your responses. As a follow-up to this investigation, you will be invited to review your interview transcription and make any amendments or additions, if you wish to do so, to ensure your views are accurately represented.

Participation is voluntary and you have the right to withdraw at any stage without penalty. You may ask for your raw data to be returned to you or destroyed at any point. If you withdraw, the researcher will remove information relating to you. However, once analysis of raw data starts on 1 July 2018, it will become increasingly difficult to remove the influence of your data on the results.

Managing risk
Spoken interviews will be conducted in professional locations. Professional and organisational reputation risks will be eliminated through assured anonymity and confidentiality of your data, as described below. If you are participating in this research in your professional capacity as an employee of an organisation you will be asked to confirm organisational consent to your participation on the consent form.

Publishing and confidentiality
A thesis is a public document and will be available through the UC Library. The results of the project may also be published and presented at conferences. You can indicate to the researcher on the consent form if you would like to receive a copy of the summary of results of the project.

Protection of data is taken seriously. You can be assured of the complete confidentiality of data gathered in this study: your identity, and the identity of your organisation, will not be made public without your prior consent. Your name, and the name of your organisation, will not be recorded on or in any data files. Data will be assigned codes which will not be linked to your name or initials.

Only the researcher will have access to the interview recordings, transcripts and other research data, unless the data is written in a language other than English. If language translation services are required, the translator will be required to sign a confidentiality agreement before accessing and translating any of the data.

All electronic data will be securely stored on a password protected computer. All printed data will be securely stored in a locked cabinet for which only the researcher holds a key. The audio recording will be deleted after transcription is completed. Transcripts and other research data will destroyed after a period of ten years.

Further information
The project is being carried out as a requirement for PhD by Adele Jackson under the supervision of Dr Daniela Liggett, who can be contacted at: adele.jackson@pg.canterbury.ac.nz and daniela.liggett@canterbury.ac.nz. They will be pleased to discuss any concerns you may have about participation in the project.

Complaints
This project has been reviewed and approved by the University of Canterbury Human Ethics Committee, and participants should address any complaints to The Chair, Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

Consent
If you agree to participate in the study, you are asked to complete a consent form and return it to Adele Jackson at: **adele.jackson@pg.canterbury.ac.nz**

Department: Gateway Antarctica
Telephone: +64 33695953
Email: adele.jackson@pg.canterbury.ac.nz

Interview Consent Form

PhD Research Project 'The Value of Artists Working in Antarctica'

Please check each box to confirm you've read and agree with the statements below

- ☐ I am over 18 years of age
- ☐ I have been given a full explanation of this project and have had the opportunity to ask questions.
- ☐ I understand what is required of me if I agree to take part in the research.
- ☐ I understand that an audio recording of the interview will be made to aid accuracy in transcription and I will be given an opportunity to review the transcript.
- ☐ I understand that participation is voluntary and I may withdraw at any time without penalty. Withdrawal of participation will also include the withdrawal of any information I have provided should this remain practically achievable.
- ☐ I understand that any information or opinions I provide will be kept confidential to the researcher and that any published or reported results will not identify the participants or their institution.
- ☐ I understand that a thesis is a public document and will be available through the UC Library.
- ☐ I understand that all data collected for the study will be kept in locked and secure facilities and/or in password protected electronic form and will be destroyed after ten years.
- ☐ I understand the risks associated with taking part and how they will be managed.
- ☐ I understand that I can contact the researcher Adele Jackson adele.jackson@pg.canterbury.ac.nz or supervisor Dr Daniela Liggett daniela.liggett@canterbury.ac.nz for further information.
- ☐ If I have any complaints, I can contact the Chair of the University of Canterbury Human Ethics Committee, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz)
- ☐ I would like a summary of the results of the project. Email address:_____

Participant consent

By signing below, I agree to participate in this research project.

Name:_____ Signed:_____ Date:_____

Please return a copy of the completed consent and demographics form to Adele Jackson at adele.jackson@pg.canterbury.ac.nz

Demographic Information

What gender do you identify as?

☐Male
☐Female
☐Not listed above. Your answer:
_____
☐Prefer not to say

What is your age?

☐18-29
☐30-49
☐50-65
☐65+
☐Prefer not to say

What is your nationality?

☐ Your answer: _____
☐ Prefer not to say

Please specify your ethnicity

☐ Black African ☐ African American ☐ Afro-Caribbean ☐ Black British/European
☐ Chinese ☐ Asian European ☐ Japanese ☐ South Asian ☐ South East Asian
☐ Latin American
☐ Māori ☐ First nation Australian ☐ Native American
☐ Pacific Islander
☐ White European ☐ White American ☐ Australian ☐ Pākehā / European New Zealander
☐ Mixed Heritage. Your answer: _____
☐ Not listed above. Your answer: _____
☐ Prefer not to say

What is the highest level of schooling or qualification you have completed?

☐ High School (up to age 16)
☐ College diploma
☐ Trade/technical/vocational training
☐ Bachelor's degree
☐ Master's degree
☐ Doctorate degree
☐ Prefer not to say

Appendix 2 Online survey questions

Which statement/s best describe your level of engagement with Antarctica and Antarctic-related topics? Select all the statements that apply to you.

I have had an interest in Antarctica since childhood.
I have friends or family who have Antarctic connections.
I work/have worked in an Antarctic-related job.
I am a student studying an Antarctic-related field.
I attend Antarctic-related talks and public events.
I attend Antarctic-related conferences.
I take notice of Antarctic-related articles in newspapers, magazines, on TV, radio or on social media.
I read Antarctic-related books and/or research papers.

Which Antarctic topics are your main areas of interest?
Arts and culture
Environmental issues
History
Politics
Science and research
Wildlife

In Antarctica were you primarily...
A tourist or adventurer
A researcher
A paid employee other than a researcher

How many times have you visited Antarctica?
Once
5 or less separate summer or winter seasons
6 or more separate summer or winter seasons

Approximately how long was your longest visit in Antarctica?
(If you visited more than once during the same season, state the total time of these visits when added together)
3 weeks or less
Weeks
Months

What year did you last visit Antarctica?

Do you take an interest in the arts?
Definition: "Take an interest" means do you enjoy, study, read, watch, participate in or listen to any arts activity such as music, literature, visual arts or performance?

Which of these statements best describes your interest in the arts?
I am an artist.
I work (or have worked) in arts and culture.
I study (or have studied) arts and culture.

I enjoy the arts. I have never studied or worked in arts and culture.
How often do you visit art galleries?
Never
Once a year or less
3-4 times a year
At least once a month
Every week

Do you look at artwork in places other than galleries?

Have you ever seen any Antarctic-related artwork?

Are you interested in seeing artwork inspired by Antarctica?

Why are you interested in artwork inspired by Antarctica?

How much Antarctic-related artwork have you seen?
One piece of art only
One exhibition
Several exhibitions by different artists
Images in a book, or on a website
Images in several books, or on several websites

Think about a piece of Antarctic-related artwork that you have seen that has impact (however you choose to define impact)

What do you remember about the artwork?

What impact does this artwork have?

What feelings does the artwork stir in you?

What memories does the artwork trigger?

What questions does the artwork prompt?

What ideas or insights does this artwork generate?

What is the role of art and artists in society and the wider world?
The role of art is:
The role of artists is:

What is the value of art (however you choose to define value)?

What is the value of artists working in Antarctica?

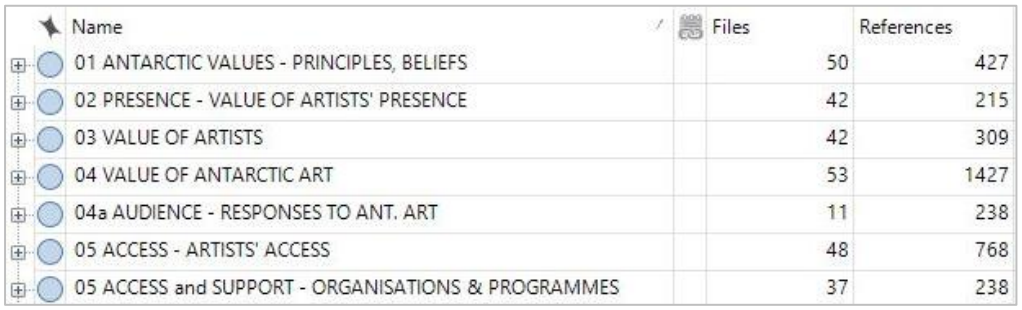
Is it important that artists work in Antarctica?
Please explain why...

Is there anything else you want to share about the value of artists working in Antarctica?

Appendix 3 Data coding and coding hierarchies

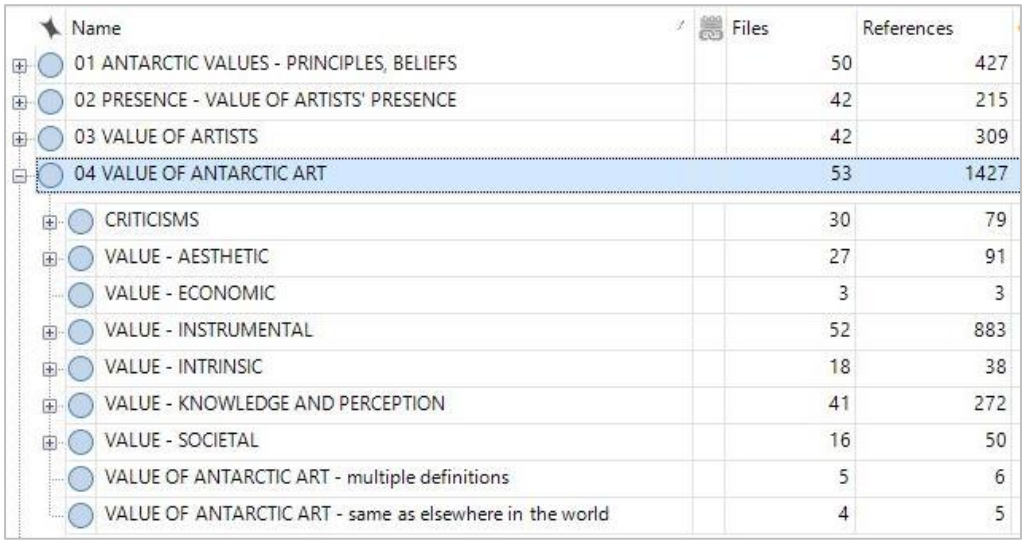
The images below are screenshots of the hierarchy of coding theme labels from the NVivo data file. The number of files and references shown in the screenshots are not an accurate representation of the number of individual participants whose responses are coded to the themes. This is because the software imported the 94 survey responses as one file rather than 94 individual files.

a) Overarching meta-themes of the top level of the coding hierarchy.



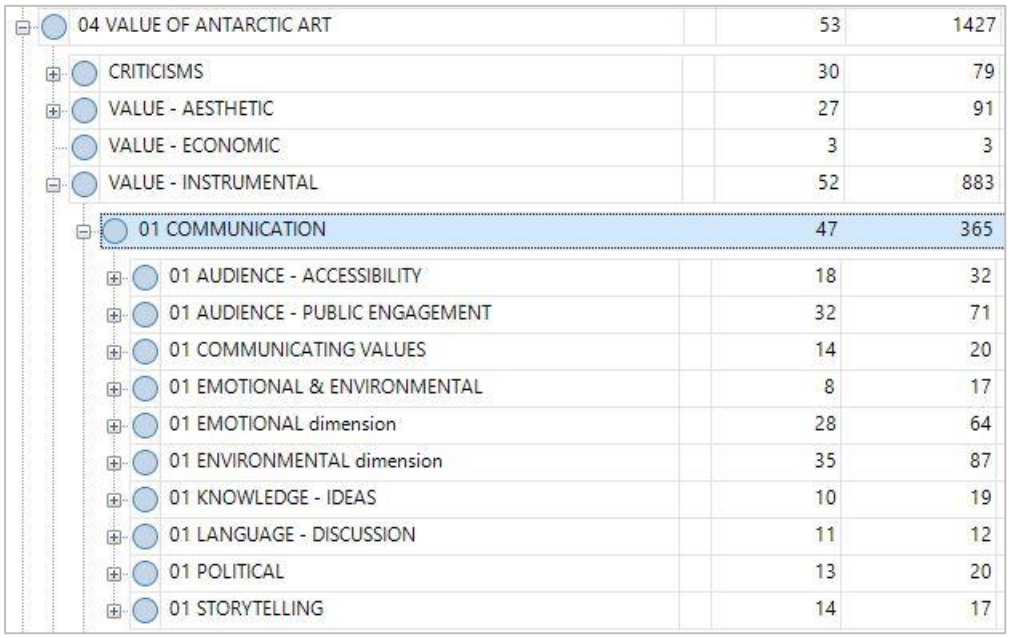
Name	Files	References
01 ANTARCTIC VALUES - PRINCIPLES, BELIEFS	50	427
02 PRESENCE - VALUE OF ARTISTS' PRESENCE	42	215
03 VALUE OF ARTISTS	42	309
04 VALUE OF ANTARCTIC ART	53	1427
04a AUDIENCE - RESPONSES TO ANT. ART	11	238
05 ACCESS - ARTISTS' ACCESS	48	768
05 ACCESS and SUPPORT - ORGANISATIONS & PROGRAMMES	37	238

b) Second level of the coding hierarchy: Key themes grouped under the meta-theme of the "Value of Antarctic Art".



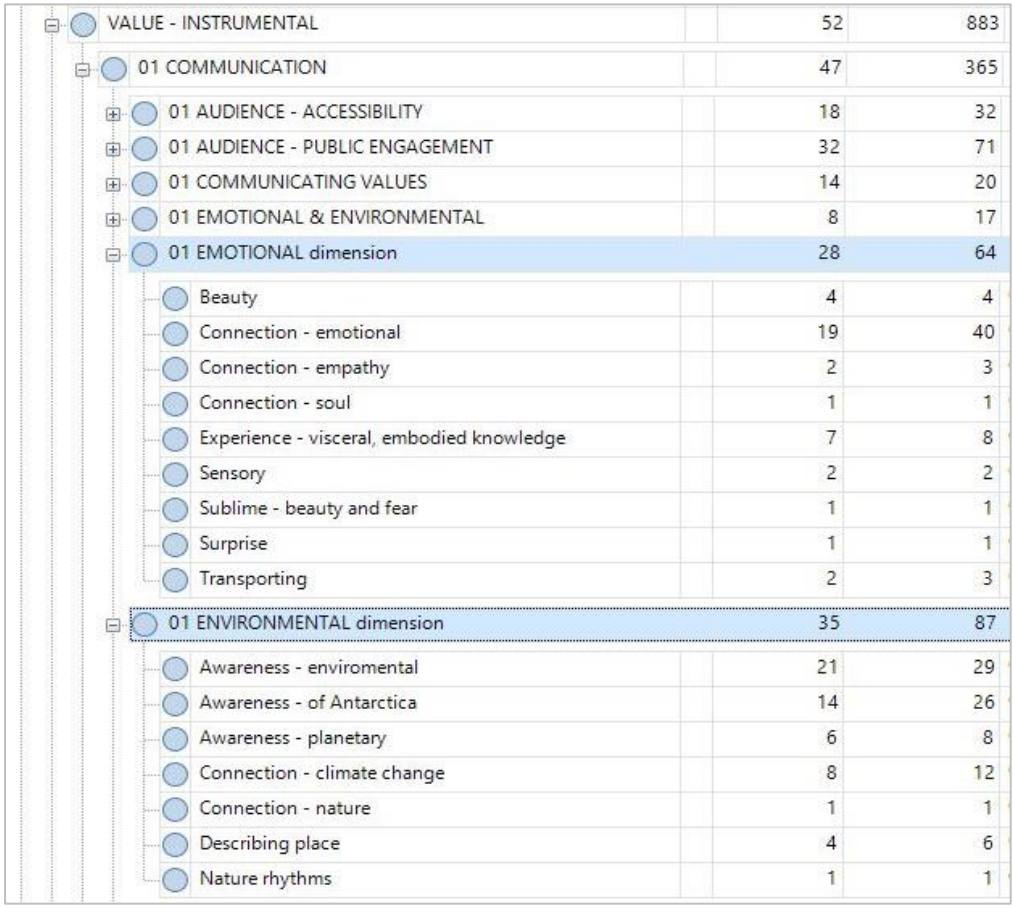
Name	Files	References
01 ANTARCTIC VALUES - PRINCIPLES, BELIEFS	50	427
02 PRESENCE - VALUE OF ARTISTS' PRESENCE	42	215
03 VALUE OF ARTISTS	42	309
04 VALUE OF ANTARCTIC ART	53	1427
CRITICISMS	30	79
VALUE - AESTHETIC	27	91
VALUE - ECONOMIC	3	3
VALUE - INSTRUMENTAL	52	883
VALUE - INTRINSIC	18	38
VALUE - KNOWLEDGE AND PERCEPTION	41	272
VALUE - SOCIETAL	16	50
VALUE OF ANTARCTIC ART - multiple definitions	5	6
VALUE OF ANTARCTIC ART - same as elsewhere in the world	4	5

c) Third and fourth level of the coding hierarchy. Within the theme of communication there were a several sub-themes.



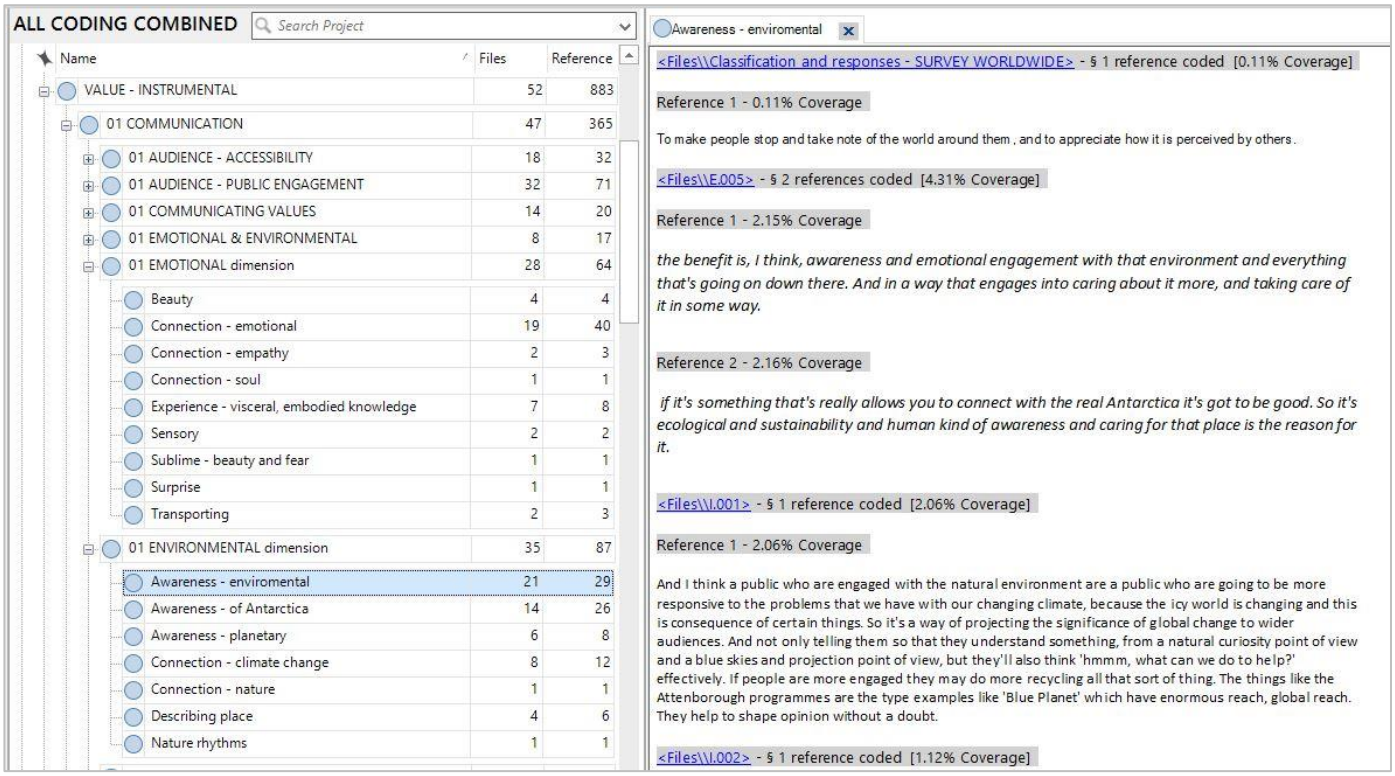
04 VALUE OF ANTARCTIC ART	53	1427
CRITICISMS	30	79
VALUE - AESTHETIC	27	91
VALUE - ECONOMIC	3	3
VALUE - INSTRUMENTAL	52	883
01 COMMUNICATION	47	365
01 AUDIENCE - ACCESSIBILITY	18	32
01 AUDIENCE - PUBLIC ENGAGEMENT	32	71
01 COMMUNICATING VALUES	14	20
01 EMOTIONAL & ENVIRONMENTAL	8	17
01 EMOTIONAL dimension	28	64
01 ENVIRONMENTAL dimension	35	87
01 KNOWLEDGE - IDEAS	10	19
01 LANGUAGE - DISCUSSION	11	12
01 POLITICAL	13	20
01 STORYTELLING	14	17

d) The fifth level of the coding hierarchy. Within each sub-theme there were several codes/exemplars.



VALUE - INSTRUMENTAL	52	883
01 COMMUNICATION	47	365
01 AUDIENCE - ACCESSIBILITY	18	32
01 AUDIENCE - PUBLIC ENGAGEMENT	32	71
01 COMMUNICATING VALUES	14	20
01 EMOTIONAL & ENVIRONMENTAL	8	17
01 EMOTIONAL dimension	28	64
Beauty	4	4
Connection - emotional	19	40
Connection - empathy	2	3
Connection - soul	1	1
Experience - visceral, embodied knowledge	7	8
Sensory	2	2
Sublime - beauty and fear	1	1
Surprise	1	1
Transporting	2	3
01 ENVIRONMENTAL dimension	35	87
Awareness - enviromental	21	29
Awareness - of Antarctica	14	26
Awareness - planetary	6	8
Connection - climate change	8	12
Connection - nature	1	1
Describing place	4	6
Nature rhythms	1	1

e) An example of coded data exemplars.



Appendix 4 A list of topics that artists have engaged with

This list of topics is indicative not comprehensive.

- Fictions and myths
- Heritage, legacy and archives
- Journals, logs, diarising
- Mapping space
- Landscape, sea and icescapes
- Geological time, ice and paleoclimate
- Ice formations: icebergs; sea ice; glaciers; sastrugi;
- Melting ice
- Climate change, global environmental and humanitarian concerns
- Human impact on the environment
- Earth systems and interconnection
- Emissions and atmospheric change
- Relationships between Earth, the solar system and outer space
- Planetary forces and dynamics
- Light spectrum and light phenomena
- Ecology and ecosystems
- Wildlife, life cycles, migration and conservation
- Marine and microscopic life
- Human interactions with marine life
- The human body: the nude
- Human presence
- Geopolitics, global citizenship and territory
- Expeditions and operations
- Living and life in Antarctic communities
- Antarctic cultures
- Architecture
- Representations of tourism